

California High-Speed Rail Authority



RFP No.: HSR13-57

**Request for Proposals for Design-Build
Services for Construction Packages 2 - 3**

**Reference Material, Part E.3 –
Merced – Fresno Incidental Take Permit**



California Department of Fish and Wildlife
Central Region
1234 EAST SHAW AVENUE
FRESNO, CALIFORNIA 93710

California Endangered Species Act
Incidental Take Permit No. 2081-2013-025-04

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1**

Authority: This California Endangered Species Act (CESA) incidental take permit (ITP) is issued by the Department of Fish and Wildlife (CDFW) pursuant to Fish and Game Code section 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, section 783.0 et seq. CESA prohibits the take¹ of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species.² CDFW may authorize the take of any such species by permit if the conditions set forth in Fish and Game Code section 2081, subdivisions (b) and (c) are met. (See Cal. Code Regs., tit. 14, § 783.4).

Permittee:	California High-Speed Rail Authority
Principal Officer:	Mark A. McLoughlin Deputy Director for Environmental Planning
Contact Person:	Mark A. McLoughlin (916) 403-6934
Mailing Address:	770 L Street, Suite 800 Sacramento, California 95814

Effective Date and Expiration Date of this ITP:

This ITP shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by signature of the Permittee on the last page of this ITP and returned to CDFW's Habitat Conservation Planning Branch at the address listed in the Notices section of this ITP. Unless renewed by CDFW, this ITP's authorization to take the Covered Species shall expire on **March 1, 2029**.

Notwithstanding the expiration date on the take authorization provided by this ITP, Permittee's obligations pursuant to this ITP do not end until CDFW accepts as complete the Permittee's Final Mitigation Report required by Condition of Approval 7.10 of this ITP.

¹Pursuant to Fish and Game Code section 86, "Take" means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." See also *Environmental Protection Information Center v. California Department of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 507 (for purposes of incidental take permitting under Fish and Game Code section 2081, subdivision (b), "take" ... means to catch, capture or kill").

²"The definition of an endangered, threatened, and candidate species for purposes of CESA are found in Fish and Game Code sections 2062, 2067, and 2068, respectively.

Project Location:

This ITP is for Permitting Phase 1 of the Merced to Fresno Section of the High-Speed Train (HST) Project (Project) which will begin at the intersection of Avenue 17 and the Burlington Northern Santa Fe (BNSF) Railway in the City of Madera, Madera County, California (Latitude 36°59'43.56"N, Longitude 120°2'34.34"W; Assessor's Parcel Number (APN) 037030007). It will continue south along the west side of the BNSF Railway until south of Avenue 15, where the alignment will transition westward toward the Union Pacific Railroad (UPRR). Near Avenue 9, the alignment will follow along the east side of the UPRR, before crossing the San Joaquin River and entering the City of Fresno. The Project will end south of State Route (SR) 41, adjacent to Los Angeles Street in the City of Fresno, Fresno County, California (Latitude 36°43'25.66"N, Longitude 119°47'3.50"W; APN 46702032U). The total length of the Project is 24.1 miles and represents only a portion of the route (approximately the southern half) analyzed in the environmental impact report for the Merced to Fresno Section of the HST (Exhibit 1 and 2).

Permittee will conduct riparian and wetland restoration at the Lazy K Ranch Mitigation Site (Mitigation Site) to offset Project impacts. The Lazy K Ranch is approximately 1,555.75 acres. It is located northeast of the City of Chowchilla, on the border of southeastern Merced and northwestern Madera counties (Exhibit 3). It is on the east side of South Santa Fe Avenue, south of the intersection with Marguerite Road. Specifically, the Lazy K Ranch is located in Section 1, Township 9 South, Range 16 East MDB&M; and Sections 7, 8, 9, and 18, Township 9 South, Range 17 East MDB&M.

Project Description:

The Project is the first of the nine California HST sections to be constructed; each section will function independently, but once joined together will create a statewide HST system. The HST will be an electrically powered, high-speed train with steel-wheel-on-steel-rail technology and state-of-the art safety, signaling, and automated train-control systems. The trains will be capable of operating at speeds of up to 220 miles per hour (mph) over a fully grade-separated, dedicated track alignment.

The Project will be built using a design/build (D/B) approach, a method of construction by which one D/B contractor works under a single contract with the Permittee to provide design and construction services. The contract with the D/B contractor will require compliance with standard development practices and regulations and implementation of any Project design features and all applicable conservation measures, mitigation measures, and permit conditions.

The Project is 24.1 miles in length and includes construction and installation of all Project components (Figure 1). Construction and installation of all Project components will disturb up to 1,049 acres (hereafter, Construction Footprint). Construction may occur at any point along the Construction Footprint, and construction may occur at multiple locations simultaneously.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

For purposes of this ITP, in addition to Construction Footprint activities (i.e. construction of the California HST), the Project also includes operations, maintenance, and inspection activities within the Construction Footprint (O&M); and Mitigation Site activities. The three types of general activities are described more fully in this Project Description. Also, each of the three general types of activities requires their own Conditions of Approval.

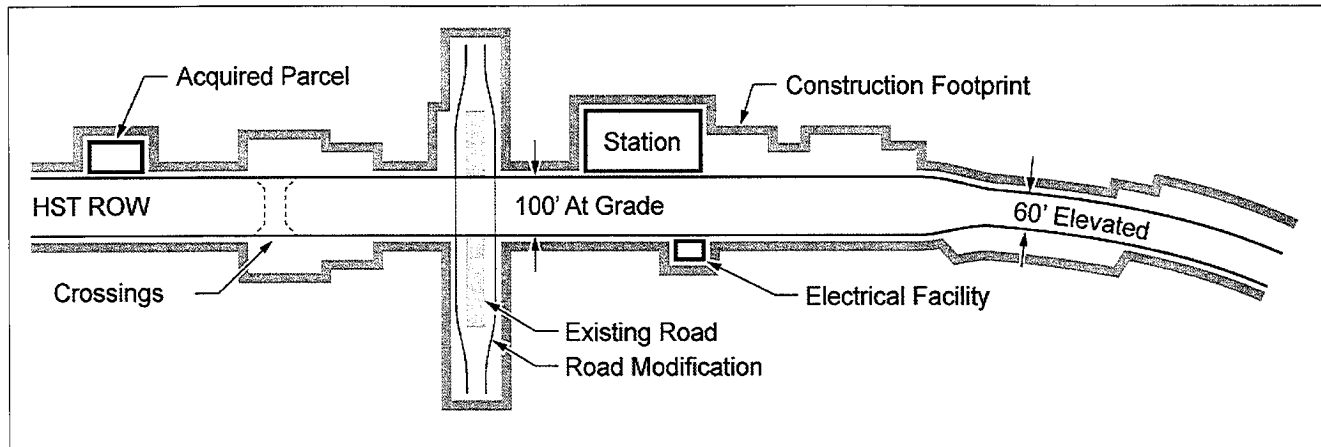


Figure 1. Conceptual Figure of Project Components within the Construction Footprint

Construction Footprint Activities

The following activities will be undertaken within the Construction Footprint during the Project:

Geotechnical Investigations: Geotechnical investigations will be conducted to define precise geological, groundwater, seismic, and hazardous material conditions along the alignment. The results of the geotechnical investigations will guide final design and construction methods for foundations, underground structures, tunnels, stations, grade crossings, aerial structures, systems, and substations. The geotechnical investigation work will involve subsurface exploration drilling near Project elements such as the SR 99 realignment, grade separation structures, and at regular intervals along the Construction Footprint. Specific geotechnical investigation sites will depend on the method of testing. Geotechnical investigation sites will include space for a truck-mounted drill rig, a water truck, and area for field crews to maneuver. The diameter of the borings will vary depending on the subsurface geological/hydrological conditions and the type of structure proposed at the investigation site. Geotechnical investigation may also include geophysical testing, soundings, and other in-place testing. Soil cuttings from the geotechnical investigations will be reused, dispersed on-site, or removed from the Construction Footprint depending on the condition of the soils and the drilling site. Drilling fluids will be discharged in accordance with the Construction General Permit (Order No. 2009-0009-DWQ as modified by Order No. 2010-0014-DWQ, NPDES No. CAS000002, adopted September 2, 2009, effective July 1, 2010), as well as the Section 401 Water Quality Certification.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

Staging Areas: Temporary areas needed for storing, fabricating, casting, and preparing pre-cast concrete segments, spoil storage areas, workshops, and storage of delivered construction materials will be identified by the Permittee. Field offices and/or temporary job-site trailers will also be located in the staging areas. All staging areas will be located within the Construction Footprint. These staging areas will be spaced roughly evenly along the Construction Footprint and will be chosen for their easy access to local roads and highways.

Utility relocation and protection: High-risk utilities, such as overhead high-voltage wires, pressurized transmission mains, water lines, fiber optics, and communications will be relocated and/or protected by the Permittee. Permittee will be responsible for completing designs and preparing plans and specification for relocation and construction of utilities. The construction and relocation of utilities will begin once Permittee has completed their design to ensure Project components are well coordinated. Permittee will be responsible to coordinate the relocation of utilities with local jurisdictions and utility owners throughout the Project and will design and construct the relocation of utilities in conflict with the Project. This ITP only covers utility relocation and protection occurring within the Construction Footprint, as defined on Page 2 of this ITP.

Batch plants: Permittee may use batch plants already in existence or a portable batch plant. One portable batch plant will be used if the Permittee needs to perform precast operations or specialty concrete that exceeds 1,500 cubic yards is required. Under these circumstances, there will be one temporary batch plant within the Construction Footprint. The temporary batch plant will be required to produce the Portland cement concrete or asphaltic concrete needed for roads, bridges, aerial structures, retaining walls, and other concrete structures. The temporary batch plant will be approximately 2,500 to 3,000 square feet in size and will consist of silos containing fly ash, lime, aggregates, and cement; heated tanks of liquid asphalt; sand and gravel material storage areas; mixing equipment; aboveground storage tanks; and designated areas for sand and gravel truck unloading, concrete truck loading, and concrete truck washout.

Site Preparation and Demolition: Vegetation removal, clearing, grubbing, demolition and grading, followed by the mobilization of equipment and materials will be executed within the Construction Footprint.

Earthwork: The following types of excavation will be employed within the Construction Footprint during earthwork activities:

- Open-cut slope will be used in areas where sufficient room is available to open-cut the area and slope the sides back to meet the adjacent existing ground. The slopes will be designed similar to any cut slope, taking into account the natural repose angle of adjacent ground material and global stability.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

- Temporary excavation support structures will be designed and installed to support vertical or nearly vertical faces of the excavation in areas where room to open-cut does not exist. This type of structure does not contribute to the final load-carrying capacity of the trench structure and will either be abandoned in place or dismantled as the excavation is being backfilled.
- Permanent structures will be designed and installed to support vertical or nearly vertical faces of the excavation in areas where room to open-cut does not exist. This type of structure will form part of the permanent final structure.

Right of Way: The HST will consist of a fully grade-separated and access-controlled track alignment to maintain local traffic and agricultural access. Unlike existing passenger and freight trains in the Project vicinity, there will be no at-grade road crossings, and the HST will not share its tracks with freight trains. The HST right-of-way (ROW) will be completely within the Construction Footprint and will typically be 100 feet wide in areas where the track is at-grade and 60 feet wide where the track is elevated. The HST ROW will permanently disturb 271.7 acres and temporarily disturb 81.89 acres (353.59 total acres). The Project will have four different vertical profiles (Table 1).

Table 1. Project Right-of-Way Vertical Profiles

Profile	Linear Miles
At-grade	18.7
Retained-fill	1.4
Retained-cut	1.6
Elevated	2.4
Total	24.1

- At-grade Profile: The rail will be fixed by specially developed high-strength clips to pre-stressed concrete cross ties that will be embedded in either crushed rock ballast or a continuous concrete slab where the alignment will be at-grade (Figure 2). This profile will be common in areas where the ground is relatively flat and in rural areas where interference with local roadways is limited. The top of the rail will be constructed at a minimum of 4.5 feet above the 100-year floodplain or higher when transitioning to an elevated structure. The height of the at-grade profile will vary to accommodate slight changes in topography, provide clearance for storm-water culverts and structures to allow water flow, and enable potential wildlife movement. A drainage system may be designed to include a three-foot wide drainage swale on either side of the track that will be intercepted at regular intervals by culverts and open structures to carry runoff to existing natural drainages or appropriate municipal drainage systems. Drainages may also include paired 30-inch wide culverts under the embankment spaced as frequently as necessary to prevent ponding and allow drainage. Ducts will be laid alongside the HST tracks to carry low-voltage power cables to power the trackside signaling and

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

communications apparatus and fiber optic cables that will enable continuous communications with the HST on-board computers and train controls. The duct covers will also serve as safety walkways for detrainning passengers in the event of an emergency train stop. There will be 18.7 miles of at-grade profile.

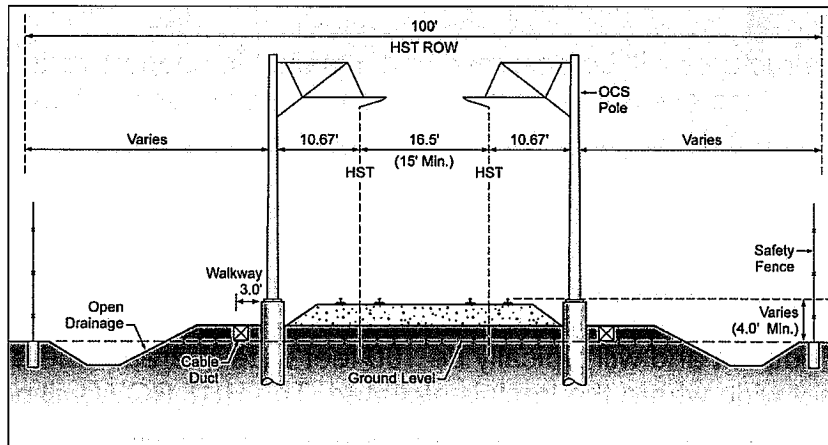


Figure 2. Typical Cross section of an At-grade Profile

At-grade Profile Construction: Permittee will begin construction of at-grade sections by excavating or leveling the ground surface up to three feet before the rail bed is built up. Excavations up to six feet may be necessary where highly compressible soils, such as peat or soft clay, are present and not remedied by other means. Following initial grading, Permittee will move earth for use in the rail bed, construct the rail bed using scrapers to expand cuts, and then deposit material to build up the rail bed. Permittee may also use materials to build embankments for nearby overpasses. Borrow materials will be obtained from existing permitted borrow pits and quarries, and construction of the rail bed will be completed using ballast material from existing permitted quarries.

- **Retained-fill profile:** Retained-fill profiles will be used to narrow the ROW within a constrained corridor to minimize property acquisition or to transition between an at-grade profile and an elevated profile (Figure 3). The rail will be raised off the existing ground on a retained-fill platform made of reinforced walls, much like a freeway ramp. Short retaining walls will have a similar effect and will protect the adjacent properties from a slope extending beyond the rail. Retained-fill profiles can be high enough to allow road undercrossings and wildlife crossings. There will be 1.4 miles of retained-fill profile.

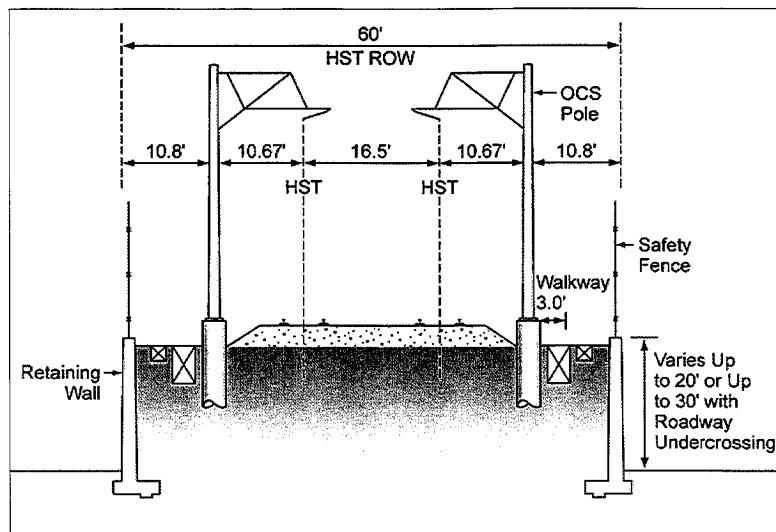


Figure 3. Typical Cross Section of a Retained-fill Profile

- Retained-cut profile:** Retained-cut profiles will be used when the rail crosses under existing rail tracks, roads, or highways that are at-grade (Figure 4). This profile type will be used only for short distances in highly urbanized and constrained situations. Retaining walls will be needed to protect the adjacent properties from a cut slope extending beyond the alignment. Retained-cut profiles are also used for roads or highways when it is more desirable to depress the roadway underneath an at-grade HST alignment. There will be 1.6 miles of retained-cut profile.

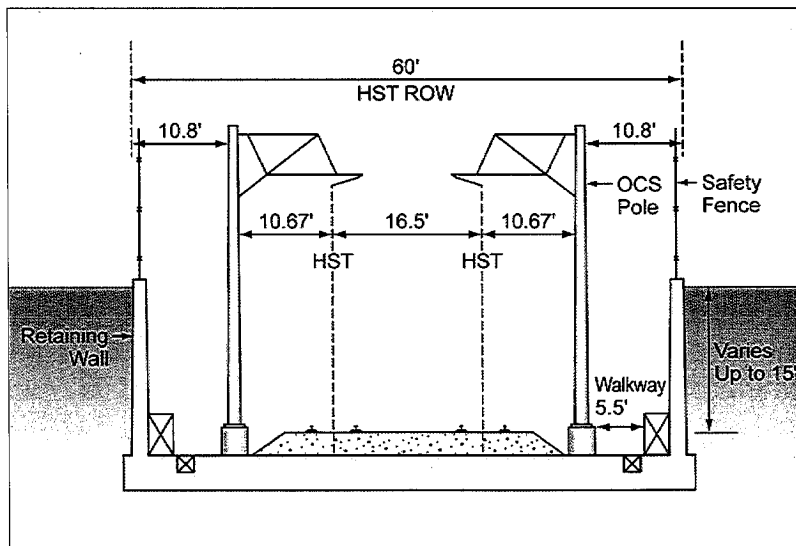


Figure 4. Typical Cross Section of a Retained-cut Profile

- Elevated profile:** Elevated profiles will be used in urban areas where extensive road networks must be maintained. An elevated profile will have a minimum clearance of approximately 16.5 feet over roadways and approximately 24 feet over railroads (Figure 5). Pier supports will be approximately ten feet in diameter at the ground. Elevated profile structures may also be used to cross water bodies. The alignment may be at-grade on either side, but the width of the water channel may require a bridge at the same level, which will be built in the same way as the elevated profile. There will be 2.4 miles of elevated profile.

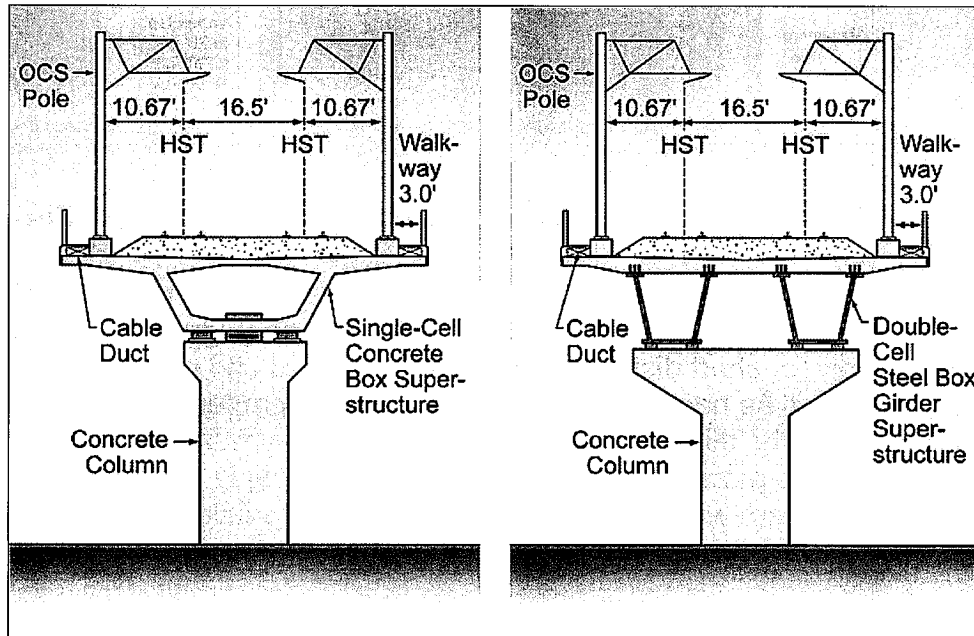


Figure 5. Typical Cross sections of Elevated Profiles

Straddle bents: When the HST elevated profile will cross over a roadway or railway on a very sharp skew (degree of difference from the perpendicular), a straddle bent will ensure that the piers are outside of the functional/operational limit of the roadway or railway (Figure 6). A straddle bent is a pier structure that spans (or “straddles”) the functional/operational limit of a roadway, highway, or railway. Roadway and highway crossings that have a smaller skew angle (i.e., the crossing is nearly perpendicular) will use intermediate piers in medians to span the functional ROW. However, for larger skew angle crossing conditions, median piers will result in excessively long spans that are not feasible. Straddle bents that clear the functional ROW will be spaced as needed (typically 110 feet apart) to provide feasible span lengths for bridge crossings at larger skew angles.

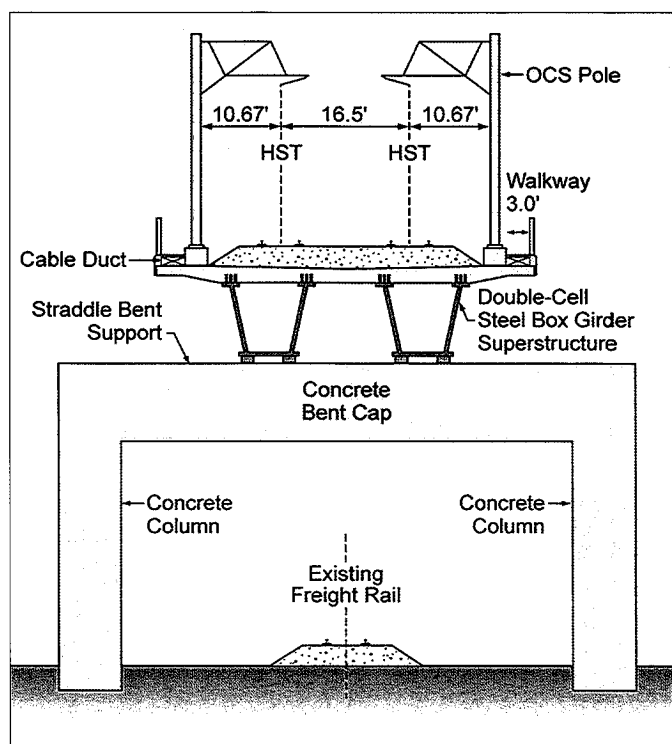


Figure 6. Typical Cross Section of a Straddle Bent

Elevated Profile Construction: Permittee may implement various methods of construction for elevated profiles, using cast-in-place (CIP) or precast/prestressed concrete and structural steel in various combinations. Where needed, other structural types will be used, including steel plate and box girders, steel trusses, and cable-supported structures.

Installation methods and the equipment required to install the elements of a structure will vary. When prefabrication of structural elements is employed using either structural steel or concrete, Permittee will produce the various prefabricated elements off-site while concurrently constructing the substructure required to support them at the various locations.

Permittee may use a precast span-by-span segmental method, whereby large, prefabricated bridge segments would be produced at a temporary, purpose-built facility, known as a fabrication/casting yard. After the element is completed, Permittee would move each prefabricated element on a special wheeled transporter to the job site for installation. Depending on the size and weight of the prefabricated element, the transporters may travel on top of the already completed portion of the elevated structure and then feed a segment to a special gantry crane (which would also stand on top of the already completed elevated structure) that hoists and positions the

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

segments. Permittee would then place the segments on piers constructed before the segments arrive at the site.

A conventional CIP reinforced or prestressed/post-tensioned concrete superstructure on temporary falsework may also be a method of constructing elevated structures. Falsework bents supported on the ground would be used for temporarily supporting CIP concrete construction. Longer span construction, where ground support of the falsework is not feasible, would be accomplished using multiple precast segmental components or CIP balanced cantilever techniques, both of which would utilize post-tensioned steel bars or tendons to support/tie the elements together.

Elevated profile structural components are as follows:

- Foundations: Aerial structure foundation pile cap is supported by an average of four large diameter piles with diameters ranging from five to nine feet. Commonly referred to as drilled shafts, they are holes drilled to the design depth and filled with reinforced concrete. The depth of the piles will depend on results from the pre-construction geotechnical investigations. Pile construction will be achieved by using rotary drilling rigs, and either bentonite or synthetic slurry along with temporary steel pipe casings that may be used to stabilize pile shaft excavation. The estimated pile production rate will vary with the diameter and depth of the drilled hole, with an estimate of three to four days per pile for installation of the larger diameter elements. Additional pile installation methods will include the bored piles, rotary drilling CIP piles, driven piles, and a combination of pile jetting and driving.
- Pile caps: After the piles are installed, pile caps may be constructed using conventional methods. For pile caps constructed near existing structures, such as railways, bridges, and underground drainage culverts, temporary sheet piling (i.e., temporary walls) may be used to minimize disturbances to adjacent structures. Sheet piling may be installed and extracted using vibratory pile-driving equipment where impact driving could affect adjacent facilities or sensitive environmental resources.
- Substructure: Aerial structures with pier heights ranging from 20 to 90 feet may be constructed using conventional slip form and scaffolding methods. A self-climbing formwork system may be used to construct piers and portal beams more than 90 feet tall. The self-climbing formwork system will be equipped with a winched lifting device that is raised along the column by hydraulic means with a structural frame mounted on top of the previous pour. A three-day cycle for each 12 feet of pour height will be achieved. The final size and spacing of the

piers will depend on the type of superstructure spans that the columns will support.

- Superstructure: The final bridge or aerial structure design may include several different methods, such as span-by-span, incrementally launched, progressive cantilever, or balanced cantilever construction. The construction methods selected will be chosen to minimize impacts to local resources.

Fencing: Fencing will be erected along the entire HST ROW for safety and security. Two types of fence will be installed: Access Restriction (AR) fencing and Access Deterring (AD) fencing.

- AR fencing is permanent fencing used to deny access to the HST tracks and to protect HST property which requires a high degree of security. AR fencing will also be used in areas where the risk of trespassing is high and the consequences may result in injury to trespassers and affect HST operation. Fencing will extend from ground level to a minimum height of eight feet, consisting of galvanized steel woven mesh or links (commonly known as chain link or cyclone fencing), topped by three strands of barbed wire, 12 inches in height.
- AD fencing is permanent fencing used to deter access and/or prevent passage to areas that do not require a high degree of security. AD fences will also be used in areas where the risk of trespassing is low, such as along elevated structures or where trespassing will not result in injuries to trespassers or cause an operational impact. AD fencing will be six feet high, secured at the top and bottom to galvanized pipe railing, and will have no barbed wire.

Electrical System Facilities: California's electricity grid will power the HST. Trains will draw electric power from a catenary system fed through an overhead contact system, with the running rails acting as the other conductor. The following electrical system facilities will distribute power to propel the HST and will collectively occupy 12.98 acres and will result in temporary disturbance to 2.18 acres (15.16 total acres) of the Construction Footprint:

- Overhead Catenary System (OCS): Trains will receive power from an electrical system supplied through the OCS. The OCS will consist of approximately 750 mast poles within the HST ROW. The mast poles will be approximately 23.5 feet higher than the top of rail with contact wires suspended from the poles between 17 to 19 feet from the top of rail. The train will have an arm, called a pantograph, to maintain contact with the wire and provide power to the train. The mast poles will be spaced approximately every 200 feet along straight portions of the track and as close as every 70 feet in tight-turn track areas. The OCS will be connected to the traction power substations. The power supply will consist of a two-kilovolt (kV) by 25-kV OCS for all electrified

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

portions of the HST. The OCS will be assembled in place over each rail and will include poles, brackets, insulators, conductors, and other hardware.

- Traction Power Substation (TPSS): One TPSS permanently disturbing 6.63 acres and resulting in temporary disturbance to 1.84 acres will be located within the Construction Footprint, adjacent to Raymond Road, north of Fresno River, in Madera County (36.984692, -120.030560). The TPSS will be adjacent to the HST ROW and will accommodate a 32,000-square-foot (or 160-foot-by-200-foot) power supply station, an approximately 450-square-foot control room, an approximately 160-foot-by-220-foot switching facility to accommodate the transformers and switchgear needed to provide high-voltage power, a powerline easement, and a buffer area for safety purposes. The TPSS will be fabricated and tested in a factory, then delivered by tractor-trailer. Access to the TPSS may be from existing roads or newly built roads that will connect to the existing road network. If newly built, the roads will be 20 feet wide, connect the perimeter fence and the nearest roadway, and occur within the Construction Footprint.
- Switching Stations: Two switching stations will be constructed within the Construction Footprint, one adjacent to North Market Street, in Fresno County (36.813741, -199.885373) and one south of West Clinton Avenue, in Fresno County (36.769937, -119.836306). Each switching station will encompass approximately 9,600 square feet (generally 80 feet by 120 feet) adjacent to the proposed HST alignment and a 20-foot wide access lane to the nearest roadway. Switching stations will be required at approximately 15-mile intervals along the Project.
- Paralleling Stations: Six paralleling stations will be constructed within the Construction Footprint (Table 2). They will provide voltage stabilization and equalize current flow. Paralleling stations will be required at approximately five-mile intervals between the switching stations and the TPSSs. The paralleling stations will each be approximately 100 feet by 80 feet (0.18 acre) in size and will be situated adjacent to the HST ROW with a 20-foot wide access lane to the nearest roadway. Each station will also include an approximately 450-square-foot (18 feet by 25 feet) control room.

Table 2. Location and Size of Project Paralleling Stations

Paralleling Station	Location	County	Coordinates	Area (acres)	
				Perm.	Temp.
1	Adjacent to Raymond Road, north of Fresno River	Madera	36.984692, -120.030560	6.63	1.84
				Includes area for TPSS adjacent to Raymond Road	
2	Adjacent to Avenue 12	Madera	36.923808, -119.982921	1.90	0.00
3	Adjacent to Road 33 between Avenue 7 and Avenue 8	Madera	36.857606, -119.946910	0.40	0.00
4	Adjacent to West Bullard Avenue	Fresno	36.822100, -119.898529	Area cannot be determined due to the magnitude of associated roadway modifications	
5	North of McKinley Avenue	Fresno	36.768018, -119.834158	2.19	0.02
6	North or south of Ventura Avenue	Fresno	36.727701, -119.789489	1.50	0.00

- **Signaling and Train Control Elements:** Signaling and train control elements include small signal huts/bungalows in the HST ROW for signal relay and microprocessor components, cabling to the field hardware and track, signals, and switch machines on the track. The signal houses are located at each universal track crossover, which are spaced at approximately 18-mile intervals along the Project. Each universal crossover includes three train control facilities, one at each end and one in the middle. The facility at each end includes one signal house (eight feet wide by 20 feet long). The facility in the middle includes two signal houses, both eight feet wide by ten feet long. All of these signal houses will be located within the HST ROW.

Signaling equipment to be installed will include wayside cabinets and bungalows, wayside signals at interlocking, switch machines, insulated joints, impedance bounds, and connecting cables. The equipment will support automatic train protection, automatic train control, and positive train control to control train separation, routing at interlocking, and speed.

Railroad Systems Construction: The railroad systems will include trackwork, traction electrification, signaling, and communications. In general, trackwork is the first rail system to be constructed, and it must be in place at least locally to start traction electrification and railroad signaling installation. Trackwork construction will require the welding of transportable lengths of steel running onto longer lengths of approximately 0.25 mile. These lengths will then be placed in position on crossties or track slabs and field-welded into continuous lengths from special trackwork to special trackwork.

Both tie and ballast as well as slab track construction will be used. Tie and ballast track construction, which will be used for at-grade and minor structures, uses cross ties and ballasts that are distributed along the trackbed by truck or tractor. In sensitive areas such as where the HST is parallel to or near streams, rivers, or wetlands, and in areas of limited accessibility, this operation may be accomplished by using the ROW with material delivery via the constructed rail line. For major structures, slab track construction will be used. Slab track construction is a non-ballasted track form employing precast track supports.

Roadway Modifications: Changes to existing roads along or crossing the HST ROW will be needed because the HST requires a fully dedicated grade-separated track alignment for public safety and to achieve the desired speeds. The Project will require 23 roadway modifications, ten in Madera County and 13 in Fresno County. Roadway modifications will occupy 592.77 acres and will also result in temporary disturbance to 71.08 acres (663.85 total acres) of the Construction Footprint (Table 3). At some locations, there will be an option to perform the modification as either an undercrossing or an overcrossing of the HST ROW. In these instances, the more conservative impact in terms of acreage (e.g., higher acreage) has been included in this ITP. Handrails, fences, and walkways will be provided for the safety of pedestrians and bicyclists during roadway modification.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

Table 3. Location and Size of Project Roadway Modifications

Street Modification	County	Activity	Area (acres)	
			Permanent	Temporary
Avenue 15 ½	Madera	Construct new overcrossing	30.16	1.16
Avenue 15	Madera	Construct new overcrossing	15.43	0.00
Avenue 13	Madera	Construct new overcrossing	28.33	0.00
Road 30 ½	Madera	Shift Road	7.06	0.00
Avenue 12	Madera	Construct new overcrossing	27.98	0.00
Avenue 11	Madera	Construct new overcrossing	10.94	0.00
Avenue 10	Madera	Construct new overcrossing	27.51	0.00
Avenue 9	Madera	Construct new overcrossing	25.54	0.00
Avenue 8	Madera	Construct new overcrossing	37.7	0.70
Avenue 7	Madera	Replace overcrossing	31.15	0.89
North Golden State Boulevard	Fresno	Shift road 4.5 miles; close road between West Olive and West Belmont avenues; construct new Veterans Boulevard overcrossing connecting Golden State Boulevard and Bullard Avenue; construct new West Shaw Avenue overcrossing; close North Carnegie Avenue	119.22	39.21
SR 99	Fresno	Shift freeway 2.3 miles; replace West Ashlan Avenue overcrossing; replace West Clinton Avenue overcrossing; construct new West McKinley Avenue overcrossing or undercrossing; shift northbound SR 99 on-ramp	201.92	7.02
West Olive Avenue	Fresno	Construct new overcrossing	15.23	0.34
West Belmont Avenue	Fresno	Construct new overcrossing and parallel frontage road	15.18	5.24
North SR 180	Fresno	Connect to North Thorne Avenue	0.86	4.26
South SR 180	Fresno	Close Divisadero Street	0.20	0.00
Stanislaus Street	Fresno	Replace overcrossing with new two-way overcrossing	3.11	0.23
Tuolumne Street	Fresno	Close Road	1.66	0.00
Fresno Street	Fresno	Extend existing undercrossing	3.42	1.69
Tulare Street	Fresno	Construct new under or overcrossing	4.02	0.89
Kern Street	Fresno	Close road	0.02	0.00
Mono Street	Fresno	Close road	Acres are included with the Downtown Fresno Station	
Ventura Street	Fresno	Construct new under or overcrossing	3.49	1.27

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

Roadway modifications to accommodate the Project include:

- **Roadway Overcrossings:** Roadway overcrossings will have two lanes, each with a width of 12 feet. The shoulders will be four to eight feet wide, depending on average daily traffic volumes. The paved surface for vehicles will range from 32 to 40 feet wide. Minimum clearance will be 27 feet over the HST (Figure 7 and 8). Specifications are based on county road standards.

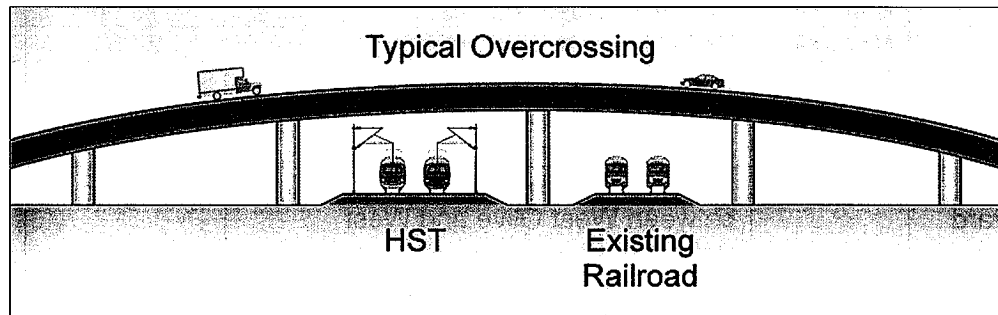


Figure 7. Typical Cross section of a Roadway Overcrossing for both the HST and an Existing Railroad

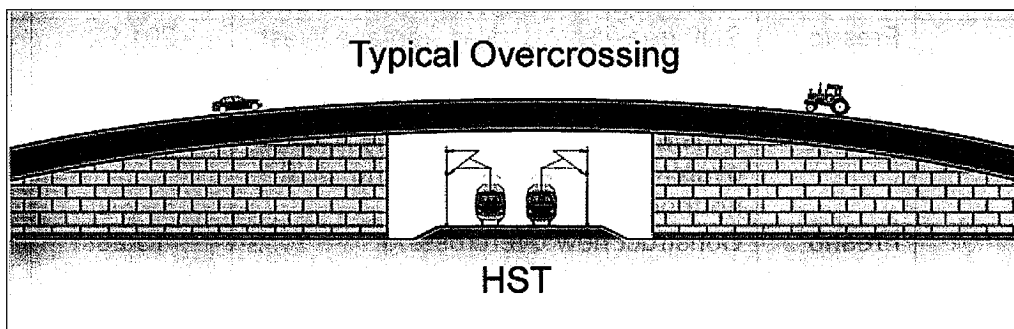


Figure 8. Typical Cross Section of a Roadway Overcrossing the HST

- **Elevated HST Overcrossings:** In urban areas, it may be more feasible to elevate the HST (Figures 5 and 6, above). This type of crossing will be especially relevant in downtown urban areas, where use of an elevated HST alignment will minimize impacts on the existing roadway system.
- **Roadway Undercrossings:** Roadway undercrossings will allow the HST to travel over roadways (Figure 9).

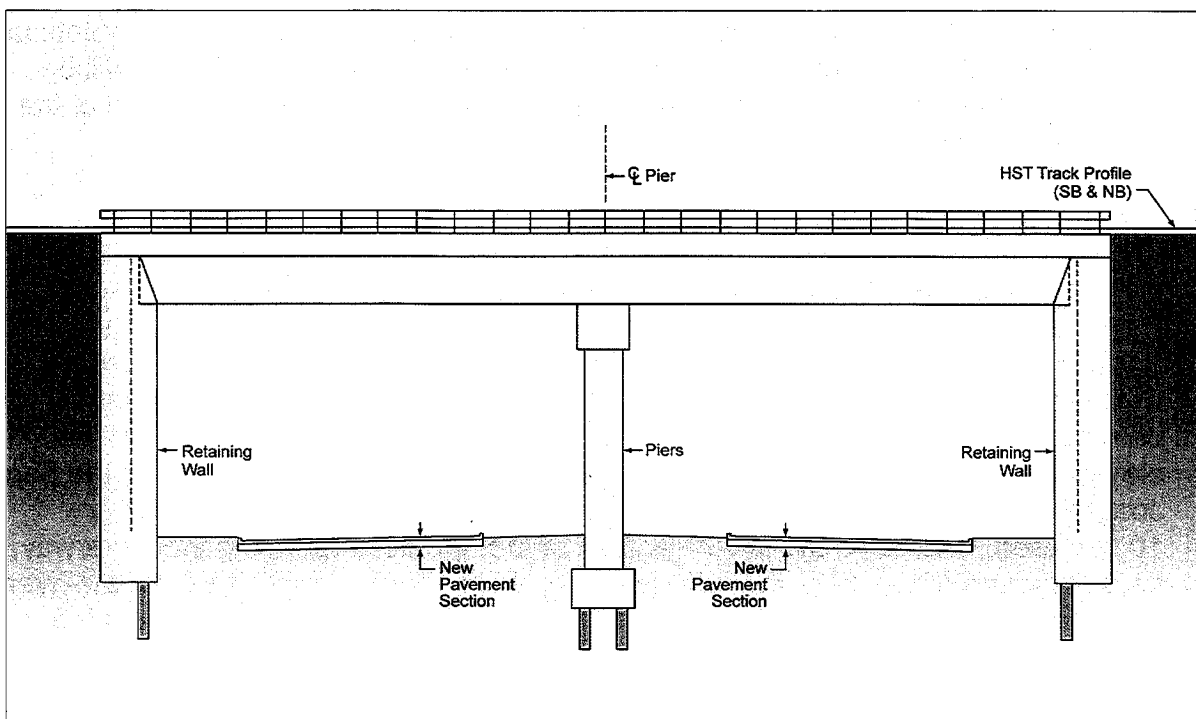


Figure 9. Typical Cross Section of a Roadway Undercrossing

Road Crossing Construction:

- Roadway modifications of existing railroads, roads, and the HST ROW, referred to as grade separations, will be constructed either on the current road alignment or on an offset or adjacent road alignment, since this may be more effective for staging the construction at some locations. When constructed on the current road alignment, the road will be closed or temporarily diverted during construction. When constructed on an offset road alignment, traffic will be maintained on the road during construction until the new crossing is completed. Construction methods will include both drilled and driven piling foundations supporting either concrete or steel super-structures carrying the roadway over the facility being crossed.
- Shoofly track, track to temporarily reroute existing UPRR and BNSF railroad tracks, will be constructed within the Construction Footprint at the southern Project limits to allow freight service to continue while downtown Fresno streets are reconstructed to pass under the HST ROW and the railroad ROW. The shoofly will temporarily relocate the existing railroad tracks to the west of their current alignment. There will be a transition section at the northern and southern ends of the shoofly, where the temporary tracks will tie back into the

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

mainline. After construction work on the road undercrossings is complete and freight service has been restored on the existing track, the shoofly will be removed, and construction within the new HST ROW will begin west of the existing track.

Waterway Crossing Structures:

- San Joaquin River Crossing Structure Construction: The San Joaquin River crossing will be accomplished by constructing an elevated truss superstructure that will use the minimum number of support structures to safely span the river and minimize the need to enter the wetted perimeter of the low-flow river channel. The crossing structure will be constructed to the east of SR 99 and the UPRR. The HST alignment will be elevated from approximately 1,000 to 1,500 feet north of the north bank of the San Joaquin River to immediately north of West Herndon Avenue (approximately 10,000 feet). The soffit, the lowest portion of the structure spanning the waterway, will be a minimum of ten to 15 feet above the top of the bank on both sides of the river, providing ample clearance for passage of flood flows and wildlife. The elevated structure that crosses the San Joaquin River will be supported by two basic foundation types: single, large-diameter (12- to 14-foot), cast-in-drilled-hole (CIDH) piles with reinforced concrete column extensions or a reinforced concrete pile footing supported by four or more eight-foot diameter CIDH piles (Figure 10). If the pre-cast span-by-span segmental method is used to build the concrete bridge spans associated with the elevated structure, an approximately 50-acre casting yard will be required. Up to five piles are anticipated to be required to complete the crossing. After completion, each concrete pile will result in a permanent impact of less than 0.05 acre. Rock slope protection will be installed on the north bank of the San Joaquin River within the ROW to stabilize the bank and minimize erosion potential. No additional permanent fill is anticipated to be required to install or maintain the crossing.

Construction of the crossing structure will occur when the San Joaquin River contains open and flowing water. Dewatering or diversion of water away from the work area will be required and accomplished by isolating the work area with a temporary cofferdam system made up of sheet piling, water-filled bladders, or other typical methods. To the maximum extent practicable, Permittee will direct diverted surface water or groundwater back into the San Joaquin River downstream from the cofferdam in a manner that meets State Water Resources Control Board and Regional Water Quality

Page 19

Control Board water quality standards. If the diverted surface water or groundwater does not meet applicable water quality standards, then water may undergo water quality treatment (such as settling tanks prior to discharge), be discharged at a publicly owned treatment works facility, and/or be temporarily applied (in both duration and volume) to land.

Once cofferdams are in place, pile construction will be accomplished using rotary drilling rigs and using either bentonite or synthetic slurry along with temporary steel pipe casings to stabilize the upper portion of the pile shaft excavation. The estimated time to construct piles will vary with the diameter and depth of the drilled hole but is anticipated to require approximately three to four days per pile for installation of the larger diameter elements.

In-stream work will be limited to that required to install elements required for temporary falsework, support piles, and the superstructure, using equipment positioned outside and within the river channel, as necessary. Temporary falsework will require the installation and removal of approximately 35 to 40 two-foot diameter steel pipe piles. These lines of piles will be placed approximately 50 feet apart along the alignment across the river channel within the ROW. It is anticipated that approximately five to eight piles will be required for each temporary support frame or bent structure. Both temporary and permanent supports will be placed using a vibratory hammer and will be designed to withstand winter flows. Both falsework construction and removal will occur during the permitted in-water work window, which is from October 16th through June 14th.

Construction of all piles within the wetted perimeter of the low-flow channel, including cofferdam installation and removal, will take approximately four to six weeks. Once construction of the river crossing is complete, the channel and banks will be returned to pre-construction contours, temporary erosion control measures and other temporary construction infrastructure will be removed, and the banks will be revegetated.

- Fresno River and Cottonwood Creek Crossing Structures Construction: The approach that will be used for the crossing of the Fresno River and Cottonwood Creek will be similar to that of the San Joaquin River crossing. The Fresno River crossing will be an elevated structure with two spans of 160 feet and a single support structure within the ordinary high water mark. On either side of the channel, the span distances will reduce to 110 feet. The foundations will be constructed with CIDH piles with CIP concrete column extensions. The superstructure will be constructed using a precast segmental approach or CIP method with falsework. The crossing of Cottonwood Creek will be an at-grade structure.

- **Culvert Construction:** Culverts will be used for at-grade and retained-cut crossings and will range in size from small diameter pipe (12 inches to several feet in diameter) to large, precast concrete-box structures (three to eight-foot high openings and opening widths of five to 24 feet). Culverts will be configured as a single conduit or as multiple parallel conduits. Culverts will be sized for a wide range of flows typical of small to medium-sized drainages or irrigation channels, with flow capacities ranging from less than one cubic foot per second (cfs) to several hundred cfs (depending on the culvert configuration, channel dimensions, channel slope, and downstream hydraulic constrictions). Each culvert or set of culverts will be sized individually based on hydrologic (runoff) and hydraulic (capacity) modeling.

In the context of irrigation canals, culverts will include pressurized pipes or inverted siphons used to pass water from an open canal headwork under the HST alignment and adjacent embankments. Where possible, a straight culvert will be used rather than a U-shaped siphon.

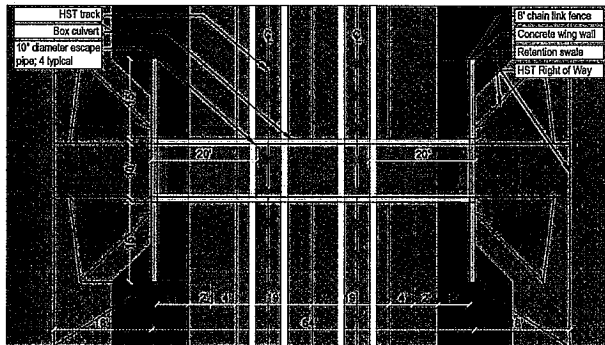
The culvert design will meet hydraulic conveyance requirements including providing for collection of trash (e.g., trash rack) or adequate capacity to pass the anticipated debris, and have adequate room for inspection and maintenance when dry. When irrigation flows or runoff cannot be conveyed by a culvert pipe, an open box culvert or a bridge will be required.

Dedicated Wildlife Crossings:

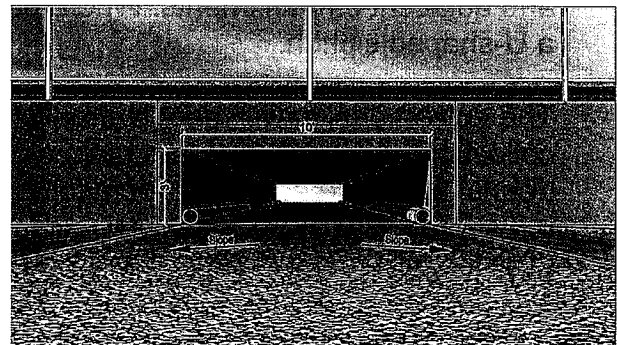
Within the Construction Footprint, five dedicated wildlife crossings will be constructed (Table 4). The wildlife crossings will consist of one of two concrete structure types, box culverts or short-span slab bridges, providing an opening below the HST tracks to facilitate wildlife movement (Figure 11 and 12). Which of the two structures used at each wildlife crossing location will depend on the height of the embankment supporting the track at any given location. The design will provide a minimum opening of three feet high, ten feet wide, and up to 73 feet long, resulting in an openness factor (OF) of 0.41 as measured by $(\text{height} \times \text{width})/\text{length}$. The length of the crossing will be reduced whenever possible to improve the OF. To accommodate variations in the topography, the height of the structure may extend as much as 18 inches below grade; however, at least 50 percent of the vertical clearance will be above grade. Where feasible from an engineering perspective and appropriate from an ecological perspective, the dedicated wildlife crossings will be constructed with larger openings that will accommodate movement across the alignment by a wider range of terrestrial wildlife species (Figure 13).

Table 4. Location of Dedicated Wildlife Crossings

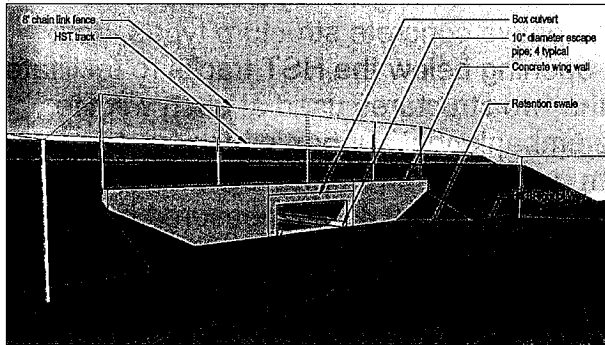
Crossing	Location	Coordinates
1	Along Santa Fe Drive 0.6 mile south of Avenue 15	36.959585, -120.006473
2	Along Santa Fe Drive 1.25 miles south of Avenue 15	36.952295, -119.999939
3	Along Santa Fe Drive 0.75 mile north of Avenue 13, just north of Cottonwood Creek	36.946687, -119.994995
4	Along private road 0.45 mile north of Avenue 12 and 0.45 mile east of Road 30½	36.929815, -119.983848
5	Along private road 0.5 mile south of Avenue 9 and 0.45 mile east of SR 99	36.873074, -119.960205



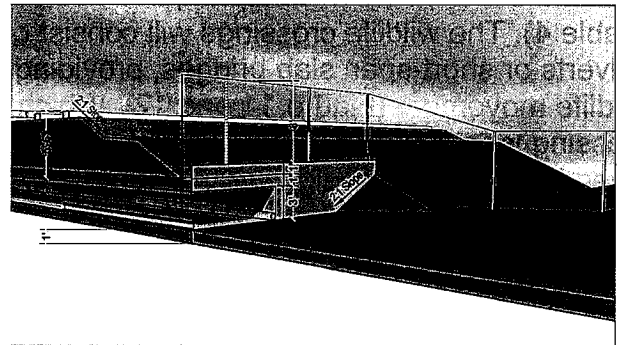
Plan View



Wildlife Perspective View



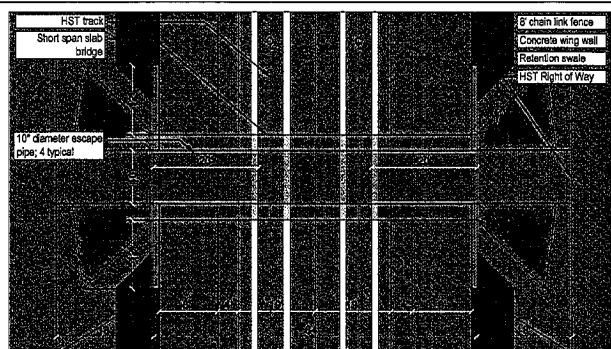
Close-up View



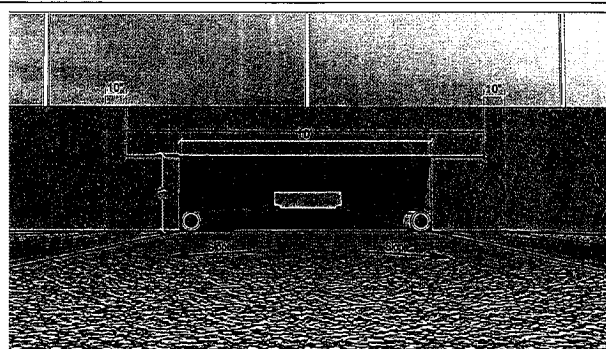
Section-cut View

Figure 11. Typical Box culvert Dedicated Wildlife Crossing

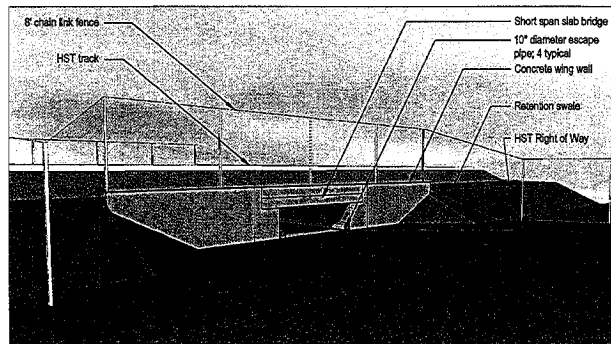
Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1



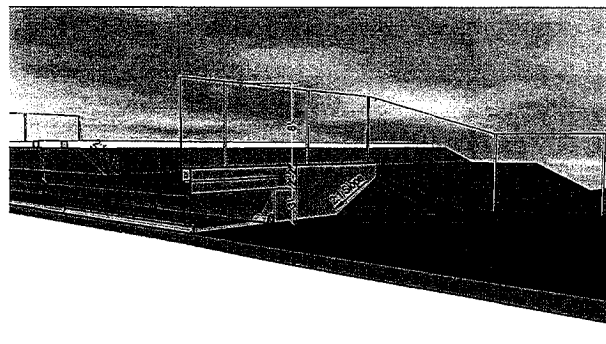
Plan View



Wildlife Perspective View



Close-up View



Section-cut View

Figure 12. Typical Short-span Slab Bridge Dedicated Wildlife Crossing

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

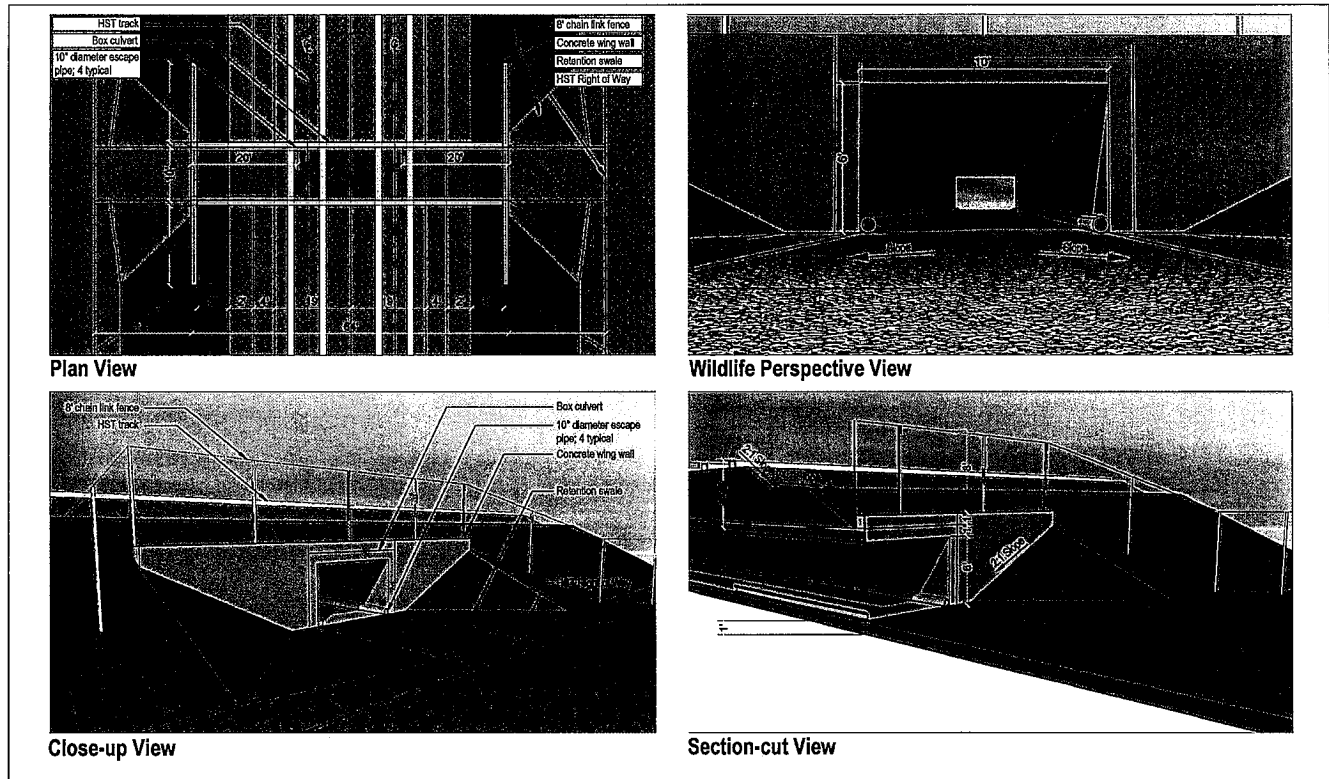


Figure 13. Larger Opening Design for Dedicated Wildlife Crossings

At locations where swales are constructed parallel to the HSR track embankment to control stormwater, they will be designed to terminate at the crossing to prevent water from ponding in the structure. The path will be shaped to drain to the sides, and small retention basins will be provided adjacent to the path to collect runoff. These features will keep the crossing passable during normal rain events. To allow terrestrial wildlife unimpeded access to the crossing structures, AR and/or AD fencing will be diverted toward the toe of the slope, up the embankment, and above the entrance of the structure. For each crossing, four sections of corrugated metal pipe, 20 feet long and ten inches in diameter, will be anchored to either the floor or the wall of the crossing. The openings of both ends of the corrugated metal pipes will be narrowed to four to six inches in diameter to afford temporary refuge opportunities for wildlife (e.g., kit fox) from larger predators.

Downtown Fresno Station:

The Downtown Fresno Station will be located adjacent to the existing Southern Pacific Depot along the UPRR tracks centered along Mariposa Street, bordered by Fresno Street on the north, Tulare Street on the south, H Street on the east, and G Street on the west. The station area will provide intermodal connectivity, drop-off facilities, an entry plaza, a station house area for ticketing and support services of approximately 75,000 square feet, a station box where passengers wait and access the HST, and parking facilities (Figure 14). The parking

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

lots will be provided around the station. There will be four elevated tracks through the station, two for local trains to stop at the station and two for express trains to pass through. More than one dual track aerial structure may be necessary. The wider footprint for the four-track section will extend for a total distance of 6,000 feet, with the station at the center. The Downtown Fresno Station will occupy a total of 11.40 permanent acres and 4.43 temporary acres (15.83 total acres) of land currently in urban development.

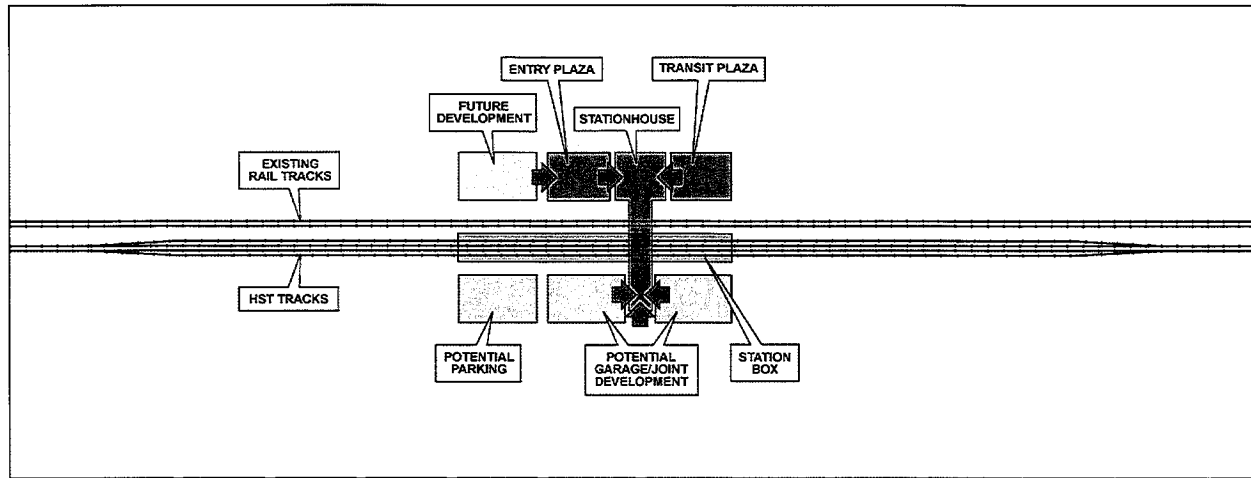


Figure 14. Conceptual Plan of the Downtown Fresno Station and Components

Vehicles:

The Project vehicle type will be an electric multiple unit (EMU) that will equip several train cars, including both end cars, with traction motors, as opposed to a locomotive-hauled train (i.e., one engine in the front and one in the rear). Each train car will have an active suspension and each powered car will have an independent regenerative braking system which returns power to the power system. The body will be made of lightweight but strong materials with an aerodynamic shape to minimize air resistance, much like a curved airplane body.

A train will be nine to 11 feet wide, consisting of one or two trainsets, each approximately 660 feet long and consisting of eight cars. A train of two trainsets will seat up to 1,000 passengers and be approximately 1,320 feet long with 16 cars. The power will be distributed to each train car via the OCS and a pair of pantographs that will reach like antennae above the train to maintain contact with the wires. Each trainset will have a train control system that can be independently monitored with override control while also communicating with the system-wide Operations Control Center. The Project will require up to 94 sets of trains in 2035, depending on the fares charged.

A computer-based automatic train control (ATC) system will control the trains. The ATC system will provide for Federal Railroad Administration (FRA)-mandated positive train control safety requirements, including safe separation of trains, over-speed prevention, and work zone protection. This will use a radio-based communications network that will include a fiber optic backbone and communications towers approximately every two to three miles, depending on the terrain and selected radio frequency. The towers will be located in the HST Construction Footprint within a fenced area of approximately 20 feet by 15 feet, including a ten-foot-by-eight-foot communications shelter and a six- to eight-foot diameter, 100-foot tall communications pole. These communications facilities may be co-located with the traction power substations.

Construction Footprint Operations, Maintenance, and Inspection (O&M) Activities
Operation:

- **Train Service:** Three categories of trains will ultimately be operated within the Project: express trains, limited-stop trains, and frequent-stop trains. After construction of California HST segments not covered by this ITP, express trains will run between major stations of the California HST (e.g., San Francisco, Los Angeles, and San Diego). Express trains will not stop within the Project and will travel through the Downtown Fresno Station on dedicated through-tracks. Limited-stop trains will provide service to some intermediate stations, as well as to the major stations. Frequent-stop trains will be spaced at least three minutes apart, will focus on regional service, and will stop at the Downtown Fresno Station.

Within the Project, the maximum train operating speed will be 220 mph. Trains will be in service from 5 a.m. at the earliest to before midnight at the latest. Four trains per hour coming from each direction will stop at the Downtown Fresno Station during peak periods, and six trains from each direction will run through. During off-peak periods, the same number of stops will be made, but the number of through trains would drop to three per hour.

- **Lighting:** The ROW will not be lighted except at the Downtown Fresno Station and associated maintenance and electrical facilities. Maintenance and electrical facilities will have permanent lighting for both interior and exterior areas, as needed to support operations; some facilities will require lighting 24 hours per day. Exterior lights will be mounted on tall masts, towers, or poles and illuminate the area with sodium or mercury-vapor light. The lights will be angled toward the ground to limit reflectance on the surrounding community. Specifics such as height, type and amperage of the lights are yet to be determined. It will not be required to continuously light all system facilities for security, but lighting will be more likely in urban areas to discourage graffiti, vandalism or trespass. Permittee will determine site-specific conditions and

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

requirements by each location. Many of the sites will require closed circuit television coverage, so some level of lighting will be required to support surveillance.

Maintenance and Inspection:

Permittee will regularly perform maintenance and inspection within the permanent ROW portion of the Construction Footprint to verify that the HST and components are functioning as required. Permittee will maintain and inspect the track, ROW, power systems, train control, signaling, communications, and other vital systems required for the safe operation of the HST.

- Track and ROW: The track will be inspected at any point several times a week, using measuring and recording equipment aboard special measuring trains featuring a design similar to that of the regular trains but operating at lower speed. These trains will be run between midnight and 5 a.m. and will pass over any given section of track once during the night.

Most adjustments to the track and routine maintenance will be accomplished in a single night at any specific location with crews and material brought by work trains along the alignment. When rail resurfacing is needed, approximately several times a year, specialized equipment will pass over the track section at five to ten mph.

Approximately every four to five years, ballasted track will require sections of more intensive maintenance of the track and structure using trains with a succession of specialized cars to raise, straighten, and tamp the track and vibrating "arms" used to move and position the ballast under the ties. The train will cover a mile-long section of track in the course of one night's maintenance. Slab track at elevated sections will not require this activity.

Other maintenance of the ROW, aerial structure, and bridge sections of the alignment will include drain cleaning, vegetation control, litter removal, and other inspection that will occur monthly to several times a year.

- Power: The OCS will be inspected nightly with repairs being made when needed, which will typically be accomplished in one night's maintenance window. Other inspections will occur monthly. Many of the functions and status of substations and the smaller facilities outside of the rail will be remotely monitored, and visits will only be made to repair or replace minor items, and several times a month to check the general site.
- Structures: Visual inspections of the structures along the ROW and testing of fire and life safety systems and equipment in or on structures will occur monthly, while inspections of all structures for structural integrity will occur at least annually. Steel

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

structures will require painting every several years. For tunnels and buildings, repair and replacement of lighting and communication components will be performed on a routine basis.

- Signaling, Train Control, and Communications: In-field inspection and testing of the signaling and train control components will occur four times a year using hand-operated tools and equipment. Communications components will be routinely inspected and maintained, usually at night, although daytime work may occur if the work area is clear of the track.
- Perimeter Fencing and Intrusion Protection: Fencing and intrusion protection systems will be remotely monitored, as well as periodically inspected. Maintenance will occur as needed.

Lazy K Ranch Mitigation Site Activities

Permittee will conduct riparian and wetland restoration at the Lazy K Ranch Mitigation Site (Mitigation Site). The riparian and wetland restoration is not intended to mitigate any impacts related to issuance of this ITP. Instead, the riparian and wetland restoration would mitigate other Project impacts pursuant to the terms and conditions of other permits, both Federal and State. However, because the riparian and wetland restoration has potential to take Covered Species, the Mitigation Site is included in the Project Area and such riparian and wetland restoration is a Covered Activity. The Mitigation Site will consist of a 115.18-acre Wetland Restoration Area, a 4.09-acre Riparian Restoration Area, and a 410.52-acre Preservation Area, for a total of 529.79 acres. There will also be 476.07 acres of Temporary Use Areas that will consist of a 474.84-acre Inoculum Collection Area and a 1.23-acre Staging Area (Exhibit 4). Within the 474.84-acre Inoculum Collection Area, a maximum of two acres will be impacted during inoculum collection.

Restoration activities at the Mitigation Site will be completed within 18 months of the start of Project construction, as documented in the Notification Before Commencement submitted pursuant to Condition of Approval 7.1. The restoration activities that will occur at the Mitigation Site include:

- Land Grading and Contouring: Land grading and contouring will occur only within the Wetland Restoration Area, where vernal pools will be created. Historically, the Wetland Restoration Area supported vernal pools; however, prior to the 1940s the site was leveled and disked for agricultural production. The vernal pools created within the Wetland Restoration Area will be designed to mimic historical vernal pool habitat present within the Wetland Restoration Area. Vernal pool slopes will be constructed to mimic side slopes of natural vernal pools in the design reference site, which will be selected from a location(s) within the Preservation Area. Vernal pool slopes will range from approximately two percent to six percent, with a targeted average of 4 percent.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

approximately three percent. The density of vernal pools is expected to be approximately 15 percent of the total restored acreage, which is similar to the vernal pool density in the design reference site.

Excavation depths will vary for each created vernal pool and will be determined by created vernal pool size, shape, slope, and position. Created vernal pools will include topographic outlet features that will limit ponding depth to better mimic the natural features in the adjacent vernal pool landscape. Created vernal pool depths will range from four to 15 inches.

The following vernal pool construction process will be implemented:

- Within the 115.18-acre Wetland Restoration Area, the top three to four inches of topsoil will be scraped down and salvaged where feasible. The salvaged topsoil will be stockpiled in an adjacent area for reapplication in restored upland areas around the created vernal pools.
- Pools will be created via excavation and contoured according to the grading plan to an elevation approximately three inches below the final design elevation.
- Excavated soils will be distributed around the created vernal pool margins and contoured to mimic natural mima-mound topography and to establish hydrological interconnectivity between individual created pools consistent with the adjacent design reference site.
- The junction between created vernal pool boundaries and upland areas will be graded and contoured to ensure a smooth, natural, wetland-upland transition.
- Stockpiled topsoil will be redistributed across the Wetland Restoration Area, including vernal pools and mounds, to provide a good substrate for plant establishment and growth.
- No soil will be disposed of off-site. Exposed soil will be reseeded with naturalized plant seed appropriate to the site to minimize erosion and invasive plant establishment.
- Inoculum will be collected from up to two acres of natural vernal pools within the Inoculum Collection Area only and distributed within the created vernal pool basins.
- Final finish grading will be performed for an overall natural, smooth contour for the created vernal pools and mounds. Sufficient soil will be left above the

hardpan for proper propagation potential for establishment of vernal pool plants (minimum of two inches).

- Staging Area: Development of the Wetland Restoration Area will require the temporary establishment of a 1.23-acre Staging Area to provide a storage and laydown area to support vernal pool creation. This area is currently used for Lazy K Ranch operations.
- Wetland Vegetation Establishment, Inoculum Collection, and Inoculation: Created vernal pools will be inoculated with a mix of soil, seeds, and organic material collected from up to two acres of natural vernal pools in the Inoculum Collection Area.

To select vernal pools for inoculum collection, vernal pools will be divided into four tiers. The first three tiers will include vernal pools supporting federally-listed large branchiopods. Among these vernal pools, those that are deeper, with a high density of vernal pool indicator species, will be harvested first (Tier 1). If more inoculum is needed, it will be collected from vernal pools with a moderate density of vernal pool indicator species (Tier 2). If more inoculum is still needed, it will be collected from vernal pools with a low density of vernal pool indicator species (Tier 3). If yet more inoculum is needed, it will be collected from additional natural vernal pools that support a high to moderate density of non-listed vernal pool indicator plants and large branchiopods.

Inoculum will not be collected from vernal pools known to support non-native invasive flora (as defined, described, and inventoried as invasive by the California Invasive Plant Council) and fauna species (e.g., American bullfrog [*Lithobates catesbeianus*]) that could pose a threat to vernal pool vegetation or invertebrate communities. Inoculum will also not be collected from vernal pools known to support or found to support succulent owl's-clover (*Castilleja campestris* spp. *succulenta*) or other state-listed plants.

Inoculum collected from vernal pools with documented midvalley fairy shrimp (*Branchinecta meso Vallensis*) will be stockpiled separately and placed in shallow, created vernal pools that provide the preferred habitat for that species. Inoculum collected from vernal pools with documented vernal pool tadpole shrimp (*Lepidurus packardii*) will also be stockpiled separately and placed into deeper, created vernal pools that provide the preferred habitat for that species.

Inoculum will be collected manually or by using a small, rubber-tired tractor to minimize disturbance to the pool site.

A maximum of ten percent of each donor vernal pool's area will be used for inoculum collection. Inoculum will be collected from no greater than one-inch in depth to

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

minimize disturbance to the donor vernal pools. Once inoculum is collected from a vernal pool, any scraped areas will be smoothed out.

- Silt Fencing: Silt fencing may temporarily be established along the portions of the perimeter of the Wetland Restoration Area, where remnant on-site swales provide the potential for sediment runoff into the Chowchilla River or Ash Slough. If needed, silt fencing will be installed prior to vernal pool creation activities. The silt fencing will consist of standard woven black fabric attached to wooden stakes and buried approximately six inches in the ground. If needed, straw wattles will be placed adjacent to the silt fencing or along swales to capture sediments. These materials will be removed after one to two rainy seasons, depending on the extent of re-establishment of vegetation on the site.
- Riparian Restoration Area: Riparian habitat restoration will occur on three acres within the 4.09-acre Riparian Restoration Area adjacent to the Chowchilla River. These activities will be accomplished by obtaining and planting approximately 300 canes from species that propagate from cuttings (e.g., willow and cottonwood) present within the Mitigation Site. A maximum of ten canes per tree will be collected. Container plants will be used to supplement cuttings, if needed, and for species that do not propagate from cuttings (e.g., valley oak, other native riparian trees, and associated native shrubs). Collection of canes will occur between November and February.

Water required to support initial planting growth will be obtained from existing wells. Establishment of plantings will require an estimated 22,240 gallons of groundwater (0.06 acre-feet) per year over the course of up to three years, after which it is expected that plantings will have reached the water table. Holes for planting cuttings will be augured using a small tractor with an attached auger. Planting holes for containers will be dug approximately 24 inches deep and approximately six to 12 inches wide, depending on container size (e.g., three times the width and two times the height). A temporary irrigation system using aboveground plastic pipes to supply drip irrigation to the riparian plantings will be installed and connected to the well(s). Installation of the system will be done by hand using a utility truck to transport pipe to the restoration area. The temporary irrigation system will be removed when riparian plantings are sufficiently established and irrigation is no longer needed. Maintenance of the system will occur as necessary, with the system removed within two to three seasons after the first planting season.

Riparian restoration activities will be limited to the use of hand tools, an auger mounted on a small tractor, and personal and light-duty trucks to transport and plant riparian trees and shrubs. During restoration, equipment will be stored within a 0.23-acre area on the bluff outside of the Chowchilla River floodplain directly adjacent to the Riparian Restoration Area. The area will be mowed or grazed, but not scraped

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

or otherwise cleared at the start of the planting activities. As an alternative or supplement to the temporary irrigation system, a water truck may be used to transport onsite well water, as required, during the dry season from late spring through late fall. All work will occur outside the ordinary high-water mark (OHWM) and be limited to those areas along the Chowchilla River channel corridor. No grading will occur as part of the riparian restoration activities. Trucks and other equipment will remain on the upland side of the OHWM. Equipment, such as pickup trucks and a tractor, may be driven onto upland terraces above the OHWM to assist with placement of riparian plantings.

Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

Name	CESA Status
1. California tiger salamander (<i>Ambystoma californiense</i>)	Threatened ³
2. Swainson's hawk (<i>Buteo swainsoni</i>)	Threatened ⁴
3. San Joaquin kit fox (<i>Vulpus macrotis mutica</i>)	Threatened ⁵

These species and only these species are the "Covered Species" for the purposes of this ITP.

Impacts of the Taking on Covered Species:

This ITP covers all Project related activities that cumulatively disturb no more than 1,049 acres within the Construction Footprint and 529.79 acres within the Lazy K Ranch Mitigation Site (the Construction Footprint and Lazy K Ranch Mitigation Site are collectively, the Project Area). Project activities include subsurface geotechnical drilling and boring; habitat grubbing, vegetation removal, clearing, and mass grading followed by the mobilization of equipment and materials; earthwork including construction of temporary and permanent excavation support structures; excavation of open cut slope and fill, at grade profile excavation and leveling, and retained fill cut, rail bed foundation soil compaction, and elevated profiles and elevated profile structure components including construction and installation of straddle bents, foundations, pile caps, substructures, and superstructures; trench digging and other subsurface utility installation, relocation, and protection; pad

³See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(3)(G).

⁴See *Id.*, subd. (b)(5)(A).

⁵See *Id.*, subd. (b)(6)(E).

preparation and construction of a batch plant, materials storage, fabrication, casting areas, access roads, and staging areas; rotary drilled reinforced concrete cast in place pile and drive pile installation; excavation of drainage swales and fabrication and installation of underground drainage culverts and pipes; 23 roadway modifications including realignment and resurfacing, construction of new access roads, overcrossing, and undercrossing; construction of waterway crossing structures over the Fresno River, Cottonwood Creek, and the San Joaquin River including partial dewatering and diversion of water; construction and assembly of tie and ballast and slab track railway systems, and shoofly track; erecting mast poles; construction of electrical systems facilities including the OCS, TPSS, two switching stations, and six paralleling stations; construction of signal huts and bungalows including installation of cabling to the field hardware and track stations; traction electrification; excavation and construction of wildlife crossings, construction of the Downtown Fresno Station; installation of AD and AR fence; construction of temporary job site trailers and field offices including the development of building pads and preparation of parking areas; application of dust suppressants; operation and maintenance activities such as track, power, structure, signaling, train control, communications, intruder, and right-of way inspection and repair; and equipment staging, inoculum collection, land grading, and excavation of wetlands in the Wetland Restoration Area and mowing, hand tool or auger planting of trees and shrubs, and installation of irrigation systems in the Riparian Restoration Area within the Lazy K Ranch Mitigation Site and other activities within the Construction Footprint and Mitigation Site described in the Project Description section of this ITP (Covered Activities).

California Tiger Salamander

The Covered Activities are expected to result in the permanent loss of up to 72.82 acres of upland refugia habitat and temporary loss of 2.26 acres of aquatic breeding habitat for California tiger salamander (CTS) (Table 6). This determination was made based on an identification of baseline vegetation cover types within the Construction Footprint. Vegetation cover type acreage that could function as CTS upland refugia and breeding habitat were quantified and subsequently used as a habitat-based proxy to estimate the extent of incidental take in the form of mortality and indirect impacts that will occur as a result of Project build out.

Covered Activities may result in the incidental take of individuals in the form of mortality ("kill") as a result of habitat loss and modification; Project-related ground and vegetation disturbance; vehicle and equipment strikes during site preparation and hauling of materials and spoils; crushing by heavy equipment and foot traffic; collapse or excavation of occupied burrows that results in crushing or suffocation of underground individuals; entombment of individuals from deposition of stockpiled material or spoils over occupied burrows; entrapment and burial within trenches and open pipelines; entombment during earthwork; entanglement in fences or in construction staging materials; increased light, noise, and vibration from human and construction activity that could cause individuals to become active at inappropriate times, potentially increasing stress levels and exposure to predation and

adverse environmental conditions; temporary displacement; and during habitat restoration in the excavation and construction of wetlands, installation of barbed wire fencing to control cattle grazing activities, planting of riparian species, management, and monitoring. Incidental take of individuals may also occur from the Covered Activities in the form of catch, capture or attempt to do so from falling into trenches and during trapping and relocation of individuals from the Construction Footprint and Mitigation Site (salvage).

Potential indirect impacts to CTS and its habitat include effects of construction activities associated with Covered Activities. These indirect effects could include complications from construction-related fugitive dust; pesticide application that could affect individuals individually or through their food sources; altered behavior resulting from Covered Activities in occupied areas; and the possibility for disease transmission to CTS from handling and relocation efforts.

Potential long-term indirect impacts to CTS associated with Covered Activities include: continued noise and vibration impacts from the routine operation and maintenance of the Project components; changes in the habitat that make CTS more vulnerable to competition, disease, or predation; introduction or spread of invasive species; increased habitat fragmentation and edge effects; pesticide use; stress through disorientation; loss of foraging opportunities; and road-building and other soil disturbance upstream or at elevations upslope of CTS habitat that could result in altered drainage patterns and reduced input of water necessary to create and maintain appropriate soil moisture, vegetation cover, and humidity requirements. Individuals displaced due to habitat loss and degradation may be unable to survive in adjacent areas if these areas are already at carrying capacity or are unsuitable for colonization.

Swainson's Hawk

Up to 164.96 acres of foraging habitat and one nest tree for Swainson's hawk (SWHA) could be permanently impacted as a result of Covered Activities (Table 6) and it is expected that all potentially suitable habitat would be permanently destroyed. Based on the results of baseline surveys conducted within the Construction Footprint in spring 2013, there is one known location of a SWHA nest tree within 0.5-mile of the Construction Footprint, on the west side of SR 99 south of the San Joaquin River. The foraging habitat impact acres were determined based on this one nest tree and the guidelines set forth in the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (California Department of Fish and Game, 1994).

Covered Activities may result in incidental take of individuals in the form of mortality ("kill") as a result of vehicle strikes due to increased Project-related traffic; as a result of the loss of young, fledglings, or eggs due to destruction of nests or abandonment of nests if construction or grading activities occurred in close proximity to nests during the nesting season of the species. Direct impacts to foraging habitat could also affect migrating individuals and the

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

fitness of SWHA young raised in close proximity to the Project, due to reduced foraging opportunities and because forage acquired further away from the nest is more energetically expensive for parents acquiring food for their dependent young. In addition, the removal of habitat during the nonbreeding season could result in a loss of reproductive productivity in subsequent years.

Potential indirect impacts to SWHA and their habitat include effects of construction activities associated with implementation of Covered Activities. These include: construction-related noise; ground vibration; fugitive dust; habitat loss and modification; introduction or spread of invasive species; and increased human activity which could result in a reduction in prey abundance and/or availability. Noise and vibration could cause physiological and/or behavioral disruptions that may interfere with breeding, result in nest abandonment, and a loss of fitness in dependent young resulting from interruptions to brooding and/or feeding schedules.

Potential long-term indirect impacts associated with Covered Activities include: nesting and foraging habitat fragmentation; nesting and foraging habitat degradation including that caused by the introduction or spread of invasive species; increased light; and increased noise and vibration. Operation and maintenance of the Project could indirectly affect nesting SWHA through noise and increased human activity. Nesting and migrating SWHA could be affected by pesticides used during Covered Activities, most likely through ingestion of contaminated prey. The Project could increase predation potential by providing perching sites for avian predators (e.g., crows and other raptors), which can be predators of SHWA eggs and young.

San Joaquin Kit Fox

Up to 304.47 total acres, of habitat for San Joaquin kit fox (SJKF) could be permanently impacted as a result of Covered Activities (Table 6). This determination was based on an identification of baseline vegetation cover types and that all potentially suitable habitat would be permanently destroyed within the Construction Footprint. Vegetation cover type acres that could function as SJKF foraging, denning, and breeding habitat were quantified and subsequently used as a habitat-based surrogate to estimate the extent of incidental take in the form of mortality and indirect impacts that will occur as a result of Project build out.

Covered Activities could result in incidental take of SJKF in the form of mortality ("kill") as a result of: vehicles strikes; crushing by heavy equipment; collapse of dens; entombment during earthwork; noise and ground vibration that could cause SJKF to leave dens at inappropriate times, potentially increasing their stress levels and exposure to predation (e.g., by urban-related predators such as dogs and mesopredators such as coyotes) and adverse environmental conditions; and entanglement in fences or in construction staging materials. Incidental take of individual SJKF may also occur from the Covered Activities in the form of catch, capture or attempt to do so from falling into trenches, excavated holes, pipes,

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

and open pipelines and during den excavation activities required to reduce the potential for direct mortality.

Potential indirect impacts to SJKF and their habitat include short-term effects of construction activities associated with implementation of Covered Activities. These include: construction-related noise and lighting; ground vibration; fugitive dust; habitat loss and modification; introduction and spread of invasive species; pesticide use and increased human activity which could result in a reduction in prey abundance; and altered behavior resulting from Project disturbance in occupied habitat areas, including physiological and behavioral disruptions that could interfere with denning, foraging, and reproduction.

Potential long-term indirect impacts associated with Covered Activities include foraging habitat loss, fragmentation and degradation, including that caused by the spread or introduction of invasive species, increased light, and increased noise.

Table 5. Covered Species Habitat Impacts

Covered Species	Habitat Type	Impact Type	Impact Acres
California tiger salamander	Upland refugia (California annual grassland, pasture, barren, fallow field, inactive agriculture, and ruderal)	Permanent	72.82
	Aquatic breeding (vernal pool, open water, seasonal wetland)	Temporary	2.26
Swainson's hawk	Foraging (California annual grassland, pasture, barren, fallow field, inactive agriculture, ruderal, field crops, row, crops, and irrigated hay crops)	Permanent	164.96
	Nesting (riparian and eucalyptus woodland)	Permanent	1 nesting tree(s)
San Joaquin kit fox	Upland (California annual grassland, pasture, barren, fallow field, inactive agriculture, and ruderal)	Permanent	304.47

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

Incidental Take Authorization of Covered Species:

This ITP authorizes incidental take of the Covered Species and only the Covered Species. With respect to incidental take of the Covered Species, CDFW authorizes the Permittee, its employees, contractors, and agents to take Covered Species incidentally in carrying out the Covered Activities, subject to the limitations described in this section and the Conditions of Approval identified below. This ITP does not authorize take of Covered Species from activities outside the scope of the Covered Activities, take of Covered Species outside of the Project Area, take of Covered Species resulting from violation of this ITP, or intentional take of Covered Species except for capture and relocation of Covered Species as authorized by this ITP.

Conditions of Approval:

Unless specified otherwise, the following measures apply to all Covered Activities within the Project Area, including areas used for vehicular ingress and egress, staging and parking and noise and vibration generating activities that may/will cause take. CDFW's issuance of this ITP and Permittee's authorization to take the Covered Species are subject to Permittee's compliance with and implementation of the following Conditions of Approval:

1. **Legal Compliance:** Permittee shall comply with all applicable federal, state, and local laws in existence on the effective date of this ITP or adopted thereafter.
2. **CEQA Compliance:** Permittee shall implement and adhere to the mitigation measures related to the Covered Species in the Biological Resources section of the California High-Speed Train Merced to Fresno Section Final Project Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (SCH No.: 2009091125) certified by The California High-Speed Rail Authority on May 3, 2012 as lead agency for the Project pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), including the EIR/EIS-referenced Biological Resources and Wetlands Technical Report (April 2012), Wetlands Delineation Report (April 2012), and Noise and Vibration Technical Report (April 2012). Permittee shall also implement and adhere to the mitigation measures related to the Covered Species in Addendum 2013-1 to the Final Merced to Fresno Project Section EIR/EIS (October 2013) and Addendum 2013-2 to the Final Merced to Fresno Section Project EIR/EIS (November 2013).
3. **LSA Agreement Compliance:** Permittee shall implement and adhere to the mitigation measures and conditions related to the Covered Species in the Lake and Streambed Alteration Agreement (LSAA) (Notification No. 1600-2013-0060-R4) for the Project and executed by CDFW pursuant to Fish and Game Code section 1600 et seq.
4. **ESA Compliance:** Permittee shall implement and adhere to the terms and conditions related to the Covered Species in the Biological Opinion of the California High-Speed

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

Train System: Merced to Fresno Section Project, Merced, Madera, and Fresno Counties (Biological Opinion No. 08ESMF00-2012-F-0248, or as amended if applicable) for the Project pursuant to the Federal Endangered Species Act (ESA). For purposes of this ITP, where the terms and conditions for the Covered Species in the federal authorization are less protective of the Covered Species or otherwise conflict with this ITP, the conditions of approval set forth in this ITP shall control.

5. **ITP Time Frame Compliance:** Permittee shall fully implement and adhere to the conditions of this ITP within the time frames set forth below and as set forth in the Mitigation Monitoring and Reporting Program (MMRP), which is included as Attachment 1 to this ITP.

6. **General Provisions:**

- 6.1. Designated Representative. Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.
- 6.2. Designated Biologist(s). Permittee shall submit to CDFW in writing the name(s), qualifications, business address(es), and contact information of a biological monitor(s) (Designated Biologist(s)) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist(s) are knowledgeable and experienced in the biology, natural history, collecting, and handling of the Covered Species. The Designated Biologist(s) shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain CDFW approval of the Designated Biologist(s) in writing before starting Covered Activities, and shall also obtain approval in advance in writing if the Designated Biologist(s) must be changed.
- 6.3. Designated Biologist Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist(s) shall have authority to immediately stop any activity that does not comply with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

- 6.4. Education Program. Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist(s) that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area.
- 6.5. Construction Monitoring Notebook. The Designated Biologist(s) shall maintain a construction-monitoring notebook on-site throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction-monitoring notebook is available for review at the Project site upon request by CDFW.
- 6.6. Trash Abatement. Permittee shall initiate a trash abatement program before starting Covered Activities and shall continue the program for the duration of the Project. Permittee shall ensure that trash and food items are contained in animal-proof containers and removed at least once a week to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs.
- 6.7. Prohibition of Dogs and Firearms. Firearms and domestic dogs shall be prohibited in the phase of the Project Area under construction as well as from site access routes during construction and development of the Project, except those firearms and domestic dogs that are in the possession of authorized security personnel or local, state, or federal law enforcement officials.
- 6.8. Dust Control. Permittee shall implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by the Designated Biologist(s). Permittee shall keep the amount of water used to the minimum amount needed, and shall not allow water to form puddles.

- 6.9. Erosion Control Materials. Permittee shall prohibit use of erosion control materials potentially harmful to Covered Species and other species, such as monofilament netting (erosion control matting) or similar material, in potential Covered Species' habitat.
- 6.10. Delineation of Property Boundaries. Before starting Covered Activities within the Project Area, Permittee shall clearly delineate the boundaries of the applicable Work Area with fencing, stakes, or flags. Permittee shall restrict all Covered Activities to within the fenced, staked, or flagged areas. Permittee shall maintain all fencing, stakes, and flags until the completion of Covered Activities in that Work Area. The Work Area is defined as the discrete zone(s) within the Project Area where Covered Activities will actively occur.
- 6.11. Delineation of Habitat. Permittee shall clearly delineate habitat of the Covered Species within the Project Area with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize the disturbance of Covered Species' habitat.
- 6.12. Project Access. Project-related personnel shall access the Project Area using existing routes, or routes identified in the Project Description and shall not cross Covered Species' habitat outside of or en route to the Project Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. Permittee shall ensure that vehicle speeds do not exceed 15 mph to avoid Covered Species on or traversing the roads. If Permittee determines construction of routes for travel are necessary outside of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of Project modification. Permittee may consider implementing additional avoidance measures, such as posting signs and installing physical barriers as necessary to prevent unauthorized off-road vehicle/equipment use. Permittee shall ensure that new and existing roads that are planned for either construction or widening do not extend beyond the boundary of the Construction Footprint. Permittee shall ensure that all vehicles passing or turning around shall do so within the Construction Footprint or in previously disturbed areas. Where new access is required and authorized by CDFW outside of existing roads or the Project Area, the route shall be clearly marked by the Designated Biologist(s) (i.e., flagged and/or staked) prior to the onset of construction. If unauthorized off-road vehicle/equipment use occurs, CDFW may halt continued operations until the violation is remedied.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

- 6.13. Staging Areas. Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to the Project Area using, to the extent possible, previously disturbed areas. Additionally, Permittee shall not use or cross Covered Species' habitat outside of the marked Project Area unless provided for as described in Condition of Approval 6.12 of this ITP.
- 6.14. Hazardous Waste. Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.
- 6.15. CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project and mitigation lands under Permittee control, and shall otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP.
- 6.16. Refuse Removal. Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.

7. Monitoring, Notification, and Reporting Provisions:

- 7.1. Notification Before Commencement. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities in each Work Area and shall document compliance with all pre-Project Conditions of Approval before starting such Covered Activities.
- 7.2. Notification of Non-compliance. The Designated Representative shall immediately notify CDFW in writing if he or she determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to CDFW within 24 hours.
- 7.3. Compliance Monitoring. The Designated Biologist(s) shall be on-site daily at each Work Area within the Project Area when vegetation and soil disturbance Covered Activities occur. The Designated Biologist(s) shall conduct compliance

inspections to: (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; and (5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area. During initial vegetation and soil disturbance, the Designated Biologist(s) shall conduct compliance inspections continuously within each of the Work Area(s) where Covered Activities are occurring. After initial vegetation and soil disturbance, the Designated Biologist(s) shall conduct compliance inspections a minimum of once per day within each of the Work Area(s) where Covered Activities are occurring. The Designated Representative or Designated Biologist(s) shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP. The Designated Biologist(s) shall conduct compliance inspections a minimum of monthly during periods of inactivity and after clearing, grubbing, and grading are completed.

- 7.4. Tracking Suitable Habitat Feature Disturbances, Map Updating, and Reporting. Permittee shall maintain Geographic Information System (GIS) shapefile layers and associated maps depicting: 1) mapped areas of all land disturbances within the Construction Footprint; and 2) mapped areas of disturbed identified habitat features suitable for Covered Species (see Condition of Approval 7.4.1 for habitat features) within the Construction Footprint (as depicted in the Baseline Map Book, Exhibit 5, Baseline Maps 1 through 54 and generated from the metadata provided by the Permittee in March 2013). Permittee shall maintain the GIS layers and metadata for those maps and shall update the GIS layers and maps if there are any new detections of Covered Species or their habitat feature. Within each Work Area of the Construction Footprint, Permittee shall track, in real time, acreages of identified habitat features suitable for Covered Species disturbed by Covered Activities. This tracking shall be maintained using a GIS format and include photo documentation of the habitat feature within a Work Area conducted no more than 14 days prior to initiation of Covered Activities. The photo documentation of each habitat feature shall include a minimum of four photos: one taken each from the North, South, East, and West and facing the habitat feature. There shall be separate photo documentation of each habitat feature suitable for Covered Species within a Work Area. Accordingly, if there are multiple habitat features in a Work Area, there will be multiple sets of photo documentation for that Work Area. The Permittee shall document the total disturbed acreage of habitat features for each Covered Species compiled from the real time tracking, and compare the documented disturbance in each Work Area to the Baseline Maps. Permittee shall provide GIS layers and the associated metadata to CDFW with the Monthly Compliance Report (see Condition of Approval 7.7). Permittee shall also maintain maps for each Covered Species

separately, and shall include updates to any of the maps in the next successive Annual Status Report (see Condition of Approval 7.8). Permittee shall also provide up-to-date GIS layers of the identified habitat features suitable for Covered Species with the Monthly Compliance Report and a summation of disturbance of identified habitat features annually at the time of Annual Status Report submission. See related Conditions of Approval 8.33.2, 8.33.3, 8.34.2, 8.34.3 concerning mapping of the Wetland Restoration Area and Riparian Restoration Area.

7.4.1. Permittee shall track the following suitable habitat features for the Covered Species:

- 7.4.1.1. CTS Upland refugia
 - California annual grassland
 - Pasture
 - Barren
 - Fallow field
 - Inactive agriculture
 - Ruderal
- 7.4.1.2. CTS Aquatic breeding
 - Vernal pool
 - Open water
 - Seasonal wetland
- 7.4.1.3. SWHA breeding
 - Riparian
 - Eucalyptus woodland
- 7.4.1.4. SWHA foraging
 - California annual grassland
 - Pasture
 - Barren
 - Fallow field
 - Inactive agriculture
 - Ruderal
 - Field crops
 - Row crops
 - Irrigated hay crops

7.4.1.5 SJKF denning, foraging, and/or dispersal

- California annual grassland
- Pasture
- Barren
- Fallow field
- Inactive agriculture
- Ruderal
- Field crops
- Row crops
- Irrigated hay crops

- 7.5. Reporting Approved Maps. Permittee shall document the cumulatively disturbed acreages of identified habitat features suitable for each Covered Species within the Construction Footprint, as well as acreages of identified habitat features anticipated to be disturbed over the succeeding 30 days, using the data maintained according to Condition of Approval 7.4. Permittee shall provide the above information to CDFW with the Monthly Compliance Report.
- 7.6. SJKF Corridor Monitoring. Permittee shall implement a SJKF Corridor Monitoring Program to determine the use of dedicated wildlife crossings by SJKF. The Permittee shall submit to CDFW for approval a SJKF Corridor Monitoring Program Plan prior to initiating construction of the dedicated wildlife crossings. The SJKF Corridor Monitoring Program Plan shall include no less than five years of monitoring efforts to assist in determining the use of dedicated wildlife crossings and other potential crossing structures by SJKF. The SJKF Corridor Monitoring Program Plan shall commence as soon as the construction of the wildlife crossings is complete. The monitoring methodology may include use of trail cameras, track plates, or other methods to determine SJKF movement. Wildlife crossing construction activities shall not proceed until the SJKF Corridor Monitoring Program Plan has been approved in writing by CDFW's Regional Representative.
- 7.7. Monthly Compliance Report. For the duration of the Construction Footprint Activities and Lazy K Ranch Mitigation Site Activities, the Designated Representative or Designated Biologist(s) shall compile the observation and inspection records identified in Condition of Approval 7.3 into a Monthly Compliance Report and submit it to CDFW along with a copy of the MMRP table with notes showing the current implementation status of each mitigation measure. Monthly Compliance Reports shall also include: 1) an accounting of the number of acres that have been disturbed within the Project area, both for the prior month and a total since ITP issuance; 2) the cumulatively disturbed acreages of identified habitat features for each of the Covered Species within the Project

Area, both for preceding 30 days and a total since ITP issuance; and 3) the acreages of identified habitat features anticipated to be disturbed over the succeeding 30 days; and 4) the up-to-date GIS layers, associated metadata, and photo documentation used to track acreages disturbed during Covered Activities and as identified in Conditions of Approval 7.4 and 7.5. Monthly Compliance Reports shall be submitted to CDFW's Regional Office no later than the 15th day of the month. The Monthly Compliance Report is due at the office listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative. At the time of this ITP's approval, the CDFW Regional Representative is Sarah Boogay (sarah.boogay@wildlife.ca.gov). CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.

- 7.8. Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31st of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Monthly Compliance Reports for that year identified in Condition of Approval 7.7; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) information about other Project impacts on the Covered Species; (7) updates to the mapped areas of all land disturbances and mapped areas of identified habitat features suitable for Covered Species within the Project Area in accordance with Condition of Approval 7.4 above; (8) a summary of findings from pre-construction surveys (e.g., number of times a Covered Species or a den, burrow, or nest was encountered, location, if avoidance was achieved, if not, what other measures were implemented); (9) beginning and ending dates of maintenance and emergency related and other Covered Activities undertaken during the reporting year; and (10) a summary of the cumulative status of the disturbed acreages of all land disturbances and identified habitat features for each of the Covered Species within the Project Area, both for the preceding twelve months and a total since ITP issuance, and the acreages of all land and identified habitat features anticipated to be disturbed over the succeeding twelve months in accordance with Conditions of Approval 7.4 and 7.5 above.

- 7.9. CNDDDB Observations. The Designated Biologist(s) shall submit all observations of Covered Species to CDFW's California Natural Diversity Database (CNDDDB) within 60 calendar days of the observation and the Designated Biologist(s) shall include copies of the submitted forms with the next Monthly Compliance Report or ASR, whichever is submitted first relative to the observation.
- 7.10. Final Mitigation Report. Within 30 days of ITP expiration, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist(s) shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Monthly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.
- 7.11. Notification of Take or Injury. Permittee shall immediately notify the Designated Biologist(s) if a Covered Species is taken or injured by a Covered Activity, or if a Covered Species is otherwise found dead or injured within the Project Area or its vicinity. The Designated Biologist(s) or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at (559) 243-4005. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send the CDFW Regional Representative a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible provide a photograph, explanation as to cause of take or injury, and any other pertinent information.

8. Take Minimization Measures:

The following requirements are intended to ensure the minimization of incidental take of Covered Species in the Project Area during Covered Activities. Permittee shall implement and adhere to the following conditions to minimize take of Covered Species:

Construction Footprint Activities

- 8.1. Conditions of Approval in the Construction Footprint. Construction Footprint Activities shall implement all General Provisions set forth in Condition of Approval

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

6 and all Monitoring, Notification, and Reporting Provisions set forth in Condition of Approval 7 of this ITP.

- 8.2. Equipment Fueling. Mobile equipment fueling and maintenance shall occur at least 100 feet from identified habitat features suitable for Covered Species, as defined by Condition of Approval 7.5; the habitat features are subject to update. Fixed equipment fueling and maintenance areas, either permanently or temporarily fixed, shall be located at a distance of at least 100 feet from Covered Species habitat, and shall include fixed containment devices that will preclude fuel or other liquids from exiting the equipment fueling maintenance area in the event of a spill or leak. Sufficient spill containment and cleanup equipment shall be present at all mobile, temporary, and permanent equipment fueling locations.
- 8.3. Lighting. Permittee shall not use permanent or temporary, fixed, exterior lighting, including motion-triggered security lighting that casts light on Covered Species habitat beyond the Construction Footprint of Covered Activities between sunset and sunrise.
- 8.4. Herbicide Use. Permittee shall ensure that all herbicide use (mixing, application, and clean-up) is done by a licensed applicator in accordance with all applicable state, federal, and local regulations. Permittee shall only apply herbicide sprays via ground application when wind speed measures less than three mph. Permittee shall ensure all herbicide sprays utilized within and adjacent to identified habitat features suitable for Covered Species contain a dye (registered for aquatic use by the California Department of Pesticide Regulation, if warranted) to prevent overspray.
- 8.5. Rodenticide Use. Permittee shall prohibit the use of rodenticides in the Construction Footprint.
- 8.6. Covered Species Observations. At any time while engaged in Covered Activities, all workers shall inform the Designated Biologist(s) if a Covered Species is seen within or near the Work Area. All Covered Activities in the vicinity of the Covered Species, which could injure or kill the animal, shall cease until the Covered Species is moved by the Designated Biologist(s) or it moves from the Work Area of its own accord.
- 8.7. Daily Entrapment Inspections. The Designated Biologist(s) shall inspect all open holes, sumps, and trenches within each Work Area at the beginning, middle, and end of each day for trapped Covered Species. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or

equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively working in the excavation and at the end of each work day. To prevent inadvertent entrapment of Covered Species or any other animals, the Designated Biologist(s) shall oversee the covering of all excavated, trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that Covered Species are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning, mid-day, the end of each day (including weekends and any other non-work days), and immediately before trenches, holes, sumps, or other excavations are back-filled, the Designated Biologist(s) shall thoroughly inspect them for trapped Covered Species. Trenches, holes, sumps, or other excavations that are covered long-term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that Covered Species have become trapped, Permittee shall cease all Covered Activities in the vicinity and notify the Designated Biologist(s) immediately. Project workers and the Designated Biologist(s) shall allow the Covered Species to escape unimpeded if possible before Covered Activities are allowed to continue, or, if the Covered Species is CTS, the Designated Biologist(s) shall capture and relocated the animal as per the CTS Salvage and Relocation Plan described in Condition of Approval 8.13.1.

- 8.8. Materials Inspection. Workers shall thoroughly inspect for Covered Species in all construction pipe, culverts, or similar structures with a diameter of 7.6 centimeters (three inches) or greater that are stored for one or more overnight periods before the structure is subsequently moved, buried, or capped. If during inspection one of these animals is discovered inside the structure, workers shall notify the Designated Biologist(s) and allow the Covered Species to safely escape that section of the structure before moving and utilizing the structure.
- 8.9. Equipment Inspection. Workers shall inspect for Covered Species under vehicles and equipment before the vehicles and equipment are moved. If a Covered Species is present, the worker shall notify the Designated Biologist(s) and wait for the Covered Species to move unimpeded to a safe location. Alternatively, the Permittee shall contact the Designated Biologist(s) to determine if the Designated

Biologist(s) can safely move the Covered Species out of harm's way in compliance with this ITP.

- 8.10. Covered Species Injury. If a Covered Species is injured as a result of Project-related activities, the Designated Biologist(s) shall immediately take it to a CDFW-approved wildlife rehabilitation or veterinary facility that routinely evaluates and treats the injured Covered Species. Permittee shall identify the facility before starting Covered Activities. Permittee shall bear any costs associated with the care or treatment of such injured Covered Species. Permittee shall notify CDFW of the injury to the Covered Species immediately by telephone and e-mail followed by a written incident report as described in Condition of Approval 7.11. Notification shall include the date, time, location, and circumstances of the incident and the name of the facility where the animal was taken.
- 8.11. Vegetation Removal Methods. Vegetative cover shall be removed prior to grading in Work Areas with identified habitat features suitable for Covered Species (as depicted in the Baseline Map Book, Exhibit 5, Baseline Maps 1 through 54). Where possible, hand tools (e.g., trimmer, chain saw, etc.) shall be used to trim or remove shrub vegetation. All vegetation removal in areas with identified habitat features suitable for Covered Species shall be monitored directly (e.g., directly observed) by the Designated Biologist(s) to minimize impacts to Covered Species.
- 8.12. Geotechnical Investigations. Permittee shall reuse, disperse on site, or remove from the Construction Footprint the soil cuttings from geotechnical investigations. Permittee shall discharge drilling fluids in accordance with the Construction General Permit (Order No. 2009-0009-DWQ as modified by Order No. 2010-0014-DWQ, NPDES No. CAS000002, adopted September 2, 2009, effective July 1, 2010) and the Section 401 Water Quality Certification.
- 8.13. Specific Measures for CTS.
 - 8.13.1. CTS Salvage and Relocation Plan. The Designated Biologist(s) shall prepare a CTS Salvage and Relocation Plan. The CTS Salvage and Relocation Plan shall include, but not be limited to, a discussion (and map) of the portion of the Project Area which represents potential breeding and upland habitat (as depicted in the Baseline Map Book, Exhibit 5, Baseline Maps 1 through 54); those areas within 1.3 miles of known breeding habitat for the Covered Species; an identification of the survey, hand excavation, capture handling, and relocation methods; identification of relocation area(s); and identification of a wildlife rehabilitation center or

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

veterinary facility that routinely evaluates or treats amphibians. The CTS Salvage and Relocation Plan shall be submitted to CDFW for approval prior to the beginning of Covered Activities. Covered Activities within the Project Area may not proceed until the CTS Relocation Plan is approved in writing by CDFW. Only approved Designated Biologist(s) are authorized to capture and handle CTS.

- 8.13.2. CTS Pre-construction Surveys. No more than 14 days prior to starting Covered Activities, the Designated Biologist(s) shall survey the Work Area(s) located within that portion of the Construction Footprint that has identified habitat features suitable for CTS (as depicted in the Baseline Map Book, Exhibit 5, Baseline Maps 1 through 54). These surveys shall provide 100 percent visual coverage of the Work Area(s) and a 50-foot buffer zone. If any CTS are found within the Work Area or 50-foot buffer zone(s), the Designated Biologist(s) shall relocate them from the Work Area or buffer zone(s) in accordance with the CDFW-approved CTS Salvage and Relocation Plan prepared in accordance with Condition of Approval 8.13.1 above. The Designated Biologist(s) shall submit a report documenting the results of the pre-construction surveys to CDFW within five days after performing the surveys.
- 8.13.3. Flag Burrows. The Designated Biologist(s) shall flag all potential small mammal burrows within the Work Area(s) and a 50-foot buffer zone(s) (see Condition of Approval 8.13.2) to alert biological and work crews to their presence. Where feasible, an avoidance buffer of 50 feet or greater around active small mammal burrows shall be maintained regardless if the burrow is in the Work Area or solely within the Work Area's 50-foot buffer zone.
- 8.13.4. Small Mammal Burrow Excavation. In each Work Area to be disturbed that is within 0.7 mile of known or potential breeding habitat for CTS (as depicted in the Baseline Map Book, Exhibit 5, Baseline Maps 1 through 54), all small mammal burrows flagged per Condition of Approval 8.13.3 that cannot be fully avoided by at least 50 feet shall be fully excavated by hand. This excavation requirement applies regardless if the burrow is located within the Work Area or the Work Area's 50-foot buffer zone. The Designated Biologist(s) shall relocate any live CTS discovered during burrow excavation in accordance with the salvage and relocation plan required in Condition of Approval 8.13.1 above. Excavation shall occur no more than 14 days after the completion of the CTS pre-construction surveys as described in Condition of Approval 8.13.2 above.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

- 8.13.5. CTS Exclusion Fencing. Permittee shall install exclusion fencing around the perimeter of all Work Area(s) within 0.7 mile of known or potential CTS breeding habitat to prevent CTS migrating into the Work Area(s). Fencing material and design shall be reviewed and approved in writing by CDFW before exclusion fencing installation. The exclusion fence shall be installed **after** all small mammal burrows inside the planned fence zone needing to be excavated are hand excavated by the Designated Biologist(s) in accordance with Condition of Approval 8.13.4 above to prevent entrapment of CTS within the Work Area(s). The exclusion fence shall be buried a minimum of four inches below ground surface and equipped with one-way exits to avoid entrapment of CTS and other amphibians or reptiles within the fenced area. The Permittee shall also avoid small mammal burrows to the maximum extent possible during the installation of the exclusion fencing. When small mammal burrows cannot be avoided by a 50-foot no disturbance buffer from the fence line, they shall be hand excavated as described in Condition of Approval 8.13.4 above by the Designated Biologist(s) prior to commencing fence installation. Alternatively, Permittee can forego exclusion fence installation. If exclusion fence is not erected at Work Area(s) within 0.7 mile of known or potential breeding habitat, all Covered Activities shall cease when a 70 percent or greater chance of rainfall is predicted within 72 hours in accordance with Condition of Approval 8.13.10 below.
- 8.13.6. CTS Exclusion Fence Installation. The Designated Biologist(s) shall accompany the exclusion fence construction crew(s) to ensure that CTS are not killed or injured during fence installation. The exclusion fence shall be supported sufficiently to maintain its integrity under all conditions such as wind and heavy rain for the duration of the Covered Activities in the Work Area being fenced. Permittee shall check the exclusion fence at least once weekly and maintain/repair the fence when necessary. Permittee should install temporary exclusion fencing in a sequential manner that corresponds to the progression of Covered Activities within Work Areas. For example, temporary fencing is not required to be installed simultaneously at all Work Areas, and shall be removed immediately upon completion of Covered Activities in each fenced Work Area.
- 8.13.7. CTS in Construction Footprint. If CTS is found by any person in the Construction Footprint before or during Covered Activities, all work that could potentially harm the CTS shall stop immediately until the Designated Biologist(s) can relocate the CTS following the CTS Salvage and Relocation Plan specified in Condition of Approval 8.13.1 above. The relocation area(s) shall be identified in the CTS Salvage and Relocation

Plan by the Designated Biologist(s) prior to the start of Covered Activities and are subject to CDFW approval.

- 8.13.8. CTS Record of Handling. All CTS captures, relocations, and observations by the Designated Biologist(s) shall include the following documented information: the date, time, and location of each occurrence using Global Positioning System (GPS) technology; the name of the party that actually identified the CTS; circumstances of the incident; the general condition and health of each individual; any diagnostic markings, sex, age (juvenile or adult); actions undertaken; and habitat description. Permittee shall also submit this information to the CNDDDB as per Condition of Approval 7.9. This information shall also be included in the Monthly Compliance Reports and Final Mitigation Report.
- 8.13.9. Dry Season Work. Fill, vegetation removal, or other ground-disturbing activities within or immediately adjacent to CTS potential breeding habitat (as depicted in the Baseline Map Book, Exhibit 5, Baseline Maps 1 through 54) shall be confined to the dry season from June 15th to October 31st.
- 8.13.10. Rain Forecast. The Designated Biologist(s) and Permittee shall monitor the National Weather Service 72-hour forecast for the Project Area. If a 70 percent or greater chance of rainfall is predicted within 72 hours, Permittee shall cease all Covered Activities in all Work Areas where initial ground disturbance (vegetation removal, grading, excavation, etc.) has yet to finish until a zero percent chance of rain is forecast. Work may continue 24 hours after the rain ceases and there is zero percent chance of precipitation in the 72-hour forecast. The Designated Biologist(s) shall re-survey each Work Area before Covered Activities resume to capture and relocate any CTS that are discovered during the surveys. Work Areas where exclusion fencing has been installed in accordance with Conditions of Approval 8.13.5 and 8.13.6 above, may continue Covered Activities during rainfall events.
- 8.13.11. Night Work. Permittee shall strictly prohibit all Covered Activities at night (the period between sunset and sunrise) in Work Areas within 1.3 miles of potential or known CTS breeding sites (as depicted in the Baseline Map Book, Exhibit 5, Baseline Maps 1 through 54) when a 70 percent or greater chance of rainfall is predicted within 72 hours of Covered Activities until zero percent chance of rain is forecast. This restriction is not applicable to Covered Activities at night in Work Areas within 1.3 miles of potential or known CTS breeding sites once they have been encircled with CTS exclusion fencing pursuant to Conditions of Approval 8.13.5 and 8.13.6.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

However, even after salamander exclusion fencing is installed, this condition still applies to construction-related traffic moving through areas within 1.3 miles of potential or known CTS breeding sites (as depicted in the Baseline Map Book, Exhibit 5, Baseline Maps 1 through 54) that are outside of the CTS exclusion fencing (e.g., on roads outside a fenced Work Area).

- 8.13.12. Soil Stockpiles. Permittee shall ensure that soil stockpiles are placed where soil will not pass into potential CTS breeding pools or into any other "Waters of the State," in accordance with Fish and Game Code section 5650. Permittee shall appropriately protect stockpiles to prevent soil erosion.
- 8.13.13. Fieldwork Code of Practice. To ensure that disease is not conveyed between Work Areas the Designated Biologist(s) shall follow the Fieldwork Code of Practice developed by the Declining Amphibian Populations Task Force (Attachment 2). The Designated Biologist(s) may substitute a bleach solution (0.5 to one cup of bleach to one gallon of water) for the ethanol solution. Care shall be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.
- 8.14. Specific Measures for SWHA.
 - 8.14.1. Pre-construction SWHA Surveys. The Designated Biologist(s) shall conduct pre-construction surveys during the SWHA nesting season (February 15th through September 15th), prior to conducting Covered Activities in each Work Area. Pre-construction surveys shall occur no more than 30 days prior to beginning Covered Activities, and shall include a 0.5-mile buffer around each Work Area. The Designated Biologist(s) shall survey all suitable habitat/nest trees for nesting SWHA. The Designated Biologist(s) or Designated Representative shall provide the nesting season survey results to CDFW in a written report no more than five days prior to beginning Covered Activities.
 - 8.14.2. SWHA Nest Buffer. The Permittee and Designated Biologist(s) shall ensure that no Covered Activities occur within 100 feet of a SWHA nest during the nesting season (February 15th through September 15th).
 - 8.14.3. SWHA Nest Buffer and Monitoring. If a nesting SWHA is found in a Work Area or the 0.5-mile Work Area buffer (see Condition of Approval 8.14.1), the Designated Biologist(s) shall be present daily for the entire duration of any Covered Activities within the Work Area to monitor the behavior of the

potentially affected SWHA. The Designated Biologist(s) shall have the authority to order the cessation of all Covered Activities if the bird(s) exhibits distress and/or abnormal nesting behavior (swooping/stooping, excessive vocalization [distress calls], agitation, failure to remain on nest, failure to deliver prey items for an extended time period, failure to maintain nest, etc.) which may cause reproductive failure (nest abandonment and loss of eggs and/or young). Permittee shall not resume Covered Activities until CDFW has been consulted by the Designated Biologist(s), and both the Designated Biologist(s) and CDFW confirm that the bird's behavior has normalized.

8.15. Specific Measures for SJKF.

- 8.15.1. SJKF Survey. No more than 30 days prior to Permittee beginning Covered Activities in each Work Area, the Designated Biologist(s) shall perform a pre-construction survey for SJKF dens (potential, known, active, atypical, and natal) in the particular Work Area. The pre-construction survey shall cover the Work Area and a buffer zone of 500 feet in size beyond the Work Area's boundaries.
- 8.15.2. SJKF Den Avoidance. If a potential SJKF den (any subterranean hole, three inches or larger, for which available evidence is insufficient to conclude that it is being used or has been used by a SJKF) is discovered or a SJKF is found in an "atypical" den such as a pipe or culvert, a minimum 50-foot buffer around the potential or "atypical" den shall be established using flagging. If a known SJKF den is discovered, Permittee shall establish a minimum buffer of at least 100 feet around the den using fencing or flagging. If a natal den (den in which SJKF young are reared) is discovered, a buffer of at least 200 feet around the den using fencing or flagging shall be established. For any natal dens with pups, the den shall have a buffer of at least 500 feet around it using fencing or flagging. Buffer zones shall be considered Environmentally Sensitive Areas, and no Covered Activities are allowed within a buffer except per Condition of Approval 8.15.3. The Permittee shall notify the United States Fish and Wildlife Service (USFWS) and CDFW's Regional Representative immediately via telephone or e-mail if any SJKF active dens, natal dens, or occupied atypical dens are discovered within or immediately adjacent to any Work Area.
- 8.15.3. SJKF Den Excavation. For active dens and potential dens that exhibit signs of SJKF use or characteristics suggestive of SJKF dens (including dens in natural substrate and in/under man-made structures) that cannot

be avoided as per Condition of Approval 8.15.2, and if, after four consecutive days of monitoring with tracking medium or infrared camera, the Designated Biologist(s) has determined that SJKF is not currently present, the den may be excavated. Potential SJKF dens without any signs of SJKF use may be excavated under the supervision of the Designated Biologist(s) without advance tracking or camera monitoring. Natal dens shall not be excavated until the pups and adults have vacated and then only after consultation with the USFWS and CDFW. If the excavation process reveals evidence of current use by SJKF then den excavation shall cease immediately and tracking or camera monitoring as described above shall be conducted/resumed. Excavation of the den may be completed when, in the judgment of the Designated Biologist(s), the SJKF has escaped from the partially excavated den. SJKF dens shall be carefully excavated until it is certain no individuals of SJKF are inside. Dens shall be fully excavated, filled with dirt and compacted to ensure that SJKF cannot reenter or use the den during Covered Activities. If an individual SJKF does not vacate a den within the Work Area within a reasonable timeframe, Permittee shall contact USFWS and CDFW and get written guidance (e-mail will suffice) from both agencies prior to proceeding with den excavation.

- 8.15.4. SJKF Den Replacement Plan. Within ten days of fully excavating a den, filling it with dirt, and compacting it (see Condition of Approval 8.15.3), Permittee shall replace each excavated known, active, and natal den with an artificial den to compensate for the loss of important shelter used by SJKF for protection, reproduction, and escape from predators. A minimum of 30 days prior to commencing Covered Activities, the Designated Biologist(s) shall prepare a SJKF Den Replacement Plan. The SJKF Den Replacement Plan shall include, but not be limited to, a discussion and map of the locations of each known, active, and natal den; a discussion and map of potential locations for artificial den replacements; an identification of the hand excavation methods; and identification of the replacement den dimensions (e.g., depth and width of den, width of den entrance, number of and placement of entrances to natal dens). The SJKF Den Replacement Plan shall be submitted to CDFW for approval prior to the beginning of Covered Activities. Covered Activities within the Project Area may not proceed until the SJKF Den Replacement Plan is approved in writing by CDFW.

Lazy K Ranch Mitigation Site Activities

- 8.16. Timeframe for Mitigation Site Activities. Permittee shall complete all Mitigation Site activities at the Lazy K Ranch within 18 months of the start of Project

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

construction, as documented in the Notification Before Commencement submitted pursuant to Condition of Approval 7.1.

- 8.17. Conditions of Approval at the Mitigation Site. Restoration activities at the Mitigation Site shall implement all General Provisions set forth in Condition of Approval 6 of this ITP.
- 8.18. Notification Before Commencement at the Mitigation Site. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities at the Mitigation Site and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities
- 8.19. Notification of Non-compliance at the Mitigation Site. The Designated Representative shall immediately notify CDFW in writing if he or she determines that the Permittee is not in compliance with any Condition of Approval of this ITP at the Mitigation Site, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP at the Mitigation Site to CDFW within 24 hours.
- 8.20. Compliance Monitoring at the Mitigation Site. The Designated Biologist(s) shall be on-site daily at each Work Area within the Mitigation Site when vegetation and soil disturbance Covered Activities occur. The Designated Biologist(s) shall conduct compliance inspections to: (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP, and that Covered Activities are only occurring in the Project Area. During initial vegetation and soil disturbance, the Designated Biologist(s) shall conduct compliance inspections continuously within each of the Work Area(s) where Covered Activities are occurring. After initial vegetation and soil disturbance, the Designated Biologist(s) shall conduct compliance inspections a minimum of once per day within each of the Work Area(s) where Covered Activities are occurring. The Designated Representative or Designated Biologist(s) shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, and monitoring activities required by this ITP. The Designated Biologist(s) shall conduct compliance inspections a minimum of monthly during periods of inactivity and after clearing, grubbing, and grading are completed.
- 8.21. Equipment Fueling and Maintenance at the Mitigation Site. Mobile equipment fueling and maintenance at the Mitigation Site shall occur at least 100 feet from identified habitat features suitable for Covered Species. Fixed equipment fueling and maintenance areas, either permanently or temporarily fixed, shall be located

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

at a distance of at least 100 feet from Covered Species habitat, and shall include fixed containment devices that will preclude fuel or other liquids from exiting the equipment fueling maintenance area in the event of a spill or leak. Sufficient spill containment and cleanup equipment shall be present at all mobile, temporary, and permanent equipment fueling locations.

- 8.22. Staging Area at the Mitigation Site. The temporary Staging Area at the Mitigation Site shall be located at a distance of at least 100 feet from Covered Species habitat, and shall include fixed containment devices that will preclude any fuel or other liquids from exiting the Staging Area in the event of a spill or leak. Sufficient spill containment and cleanup equipment shall be present at the temporary Staging Area. Permittee shall restore the temporary Staging Area to pre-Project conditions upon the completion of vernal pool creation and riparian restoration.
- 8.23. Night Work at the Mitigation Site. Permittee shall strictly prohibit all Covered Activities at night (the period between sunset and sunrise) at the Mitigation Site.
- 8.24. Herbicide Use at the Mitigation Site. Permittee shall prohibit the use of herbicides at the Mitigation Site, except to spot-treat non-native invasive vegetation (as defined, described, and inventoried as invasive by the California Invasive Plant Council). Permittee shall ensure that all herbicide use (mixing, application, and clean-up) at the Mitigation Site is done by a licensed applicator in accordance with all applicable state, federal, and local regulations. Permittee shall only apply herbicide sprays via ground application when wind speed measures less than three mph at the Mitigation Site. Permittee shall ensure all herbicide sprays utilized within and adjacent to identified habitat features suitable for Covered Species contain a dye (registered for aquatic use by the California Department of Pesticide Regulation, if warranted) to prevent overspray at the Mitigation Site.
- 8.25. Rodenticide Use at the Mitigation Site. Permittee shall prohibit the use of rodenticides at the Mitigation Site.
- 8.26. Covered Species Observations at the Mitigation Site. At any time while engaged in Covered Activities, all workers shall inform the Designated Biologist(s) if a Covered Species is seen within or near the Work Area. All Covered Activities in the vicinity of the Covered Species, which could injure or kill the animal, shall cease until the Covered Species is moved by the Designated Biologist(s) or it moves from the Work Area of its own accord.
- 8.27. Daily Entrapment Inspections at the Mitigation Site. The Designated Biologist(s) shall inspect all open holes, sumps, and trenches within each Mitigation Site Work Area at the beginning, middle, and end of each day for trapped Covered

Species. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively working in the excavation and at the end of each work day. To prevent inadvertent entrapment of Covered Species or any other animals, the Designated Biologist(s) shall oversee the covering of all excavated, trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that Covered Species are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning, mid-day, the end of each day (including weekends and any other non-work days), and immediately before trenches, holes, sumps, or other excavations are back-filled, the Designated Biologist(s) shall thoroughly inspect them for trapped Covered Species. Trenches, holes, sumps, or other excavations that are covered long-term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that Covered Species have become trapped, Permittee shall cease all Covered Activities in the vicinity and notify the Designated Biologist(s) immediately. Project workers and the Designated Biologist(s) shall allow the Covered Species to escape unimpeded if possible before Covered Activities are allowed to continue, or, if the Covered Species is CTS, the Designated Biologist(s) shall capture and relocated the animal as per the CTS Salvage and Relocation Plan described in Condition of Approval 8.13.1.

- 8.28. Materials Inspection at the Mitigation Site. Workers shall thoroughly inspect for Covered Species at the Mitigation Site in all construction pipe, culverts, or similar structures with a diameter of 7.6 centimeters (three inches) or greater that are stored for one or more overnight periods before the structure is subsequently moved, buried, or capped. If during inspection one of these animals is discovered inside the structure, workers shall notify the Designated Biologist(s) and allow the Covered Species to safely escape that section of the structure before moving and utilizing the structure.
- 8.29. Equipment Inspection at the Mitigation Site. Workers shall inspect for Covered Species under vehicles and equipment at the Mitigation Site before the vehicles and equipment are moved. If a Covered Species is present, the worker shall

notify the Designated Biologist(s) and wait for the Covered Species to move unimpeded to a safe location. Alternatively, the Permittee shall contact the Designated Biologist(s) to determine if the Designated Biologist(s) can safely move the Covered Species out of harm's way in compliance with this ITP.

- 8.30. Covered Species Injury at the Mitigation Site. If a Covered Species is injured at the Mitigation Site as a result of Mitigation Site Covered Activities, the Designated Biologist(s) shall immediately take it to a CDFW-approved wildlife rehabilitation or veterinary facility that routinely evaluates and treats the injured Covered Species. Permittee shall identify the facility before starting Covered Activities. Permittee shall bear any costs associated with the care or treatment of such injured Covered Species. Permittee shall notify CDFW of the injury to the Covered Species immediately by telephone and e-mail followed by a written incident report as described in Condition of Approval 7.11. Notification shall include the date, time, location, and circumstances of the incident and the name of the facility where the animal was taken.
- 8.31. Vegetation Removal Methods at the Mitigation Site. Vegetative cover at the Mitigation Site shall be removed prior to grading in Work Areas with identified habitat features suitable for Covered Species. Where possible, hand tools (e.g., trimmer, chain saw, etc.) shall be used to trim or remove shrub vegetation. All vegetation removal in areas with identified habitat features suitable for Covered Species shall be monitored directly (e.g., directly observed) by the Designated Biologist(s) to minimize impacts to Covered Species.
- 8.32. Preservation Area. Permittee shall not conduct any Covered Activities within, or otherwise impact, the Preservation Area at the Mitigation Site.
- 8.33. Wetland Restoration.
- 8.33.1. Land grading and contouring shall occur only within the 115.18-acre Wetland Restoration Area, where vernal pools will be created.
 - 8.33.2. Permittee shall maintain GIS shapefile layers and associated maps depicting mapped areas of all Covered Activities within the Wetland Restoration Area. Permittee shall provide the above information to CDFW with the Monthly Compliance Report.
 - 8.33.3. Permittee shall document the cumulatively disturbed acreages of the Wetland Restoration Area at the Mitigation Site. Permittee shall provide the above information to CDFW with the Monthly Compliance Report.

- 8.33.4. Topsoil excavation shall be limited to the top three to four inches.
- 8.33.5. Soil shall not be disposed of offsite and exposed soil shall be reseeded with naturalized plant seed appropriate to the site to minimize erosion and invasive plant establishment.
- 8.33.6. A minimum of two inches of soil above the hardpan shall remain for propagation of vernal pool plants.

8.34. Inoculum Collection Area.

- 8.34.1. Permittee shall collect inoculum from up to two acres of natural vernal pools within the Inoculum Collection Area **only** for distribution within the created vernal pool basins.
- 8.34.2. Permittee shall maintain GIS shapefile layers and associated maps depicting mapped areas of all disturbances within the Inoculum Collection Area. Permittee shall provide the above information to CDFW with the Monthly Compliance Report.
- 8.34.3. Permittee shall document the cumulatively disturbed acreages of the Inoculum Collection Area at the Mitigation Site. Permittee shall provide the above information to CDFW with the Monthly Compliance Report.
- 8.34.4. Inoculum shall not be collected from vernal pools known to support non-native invasive flora (as defined, described, and inventoried as invasive by the California Invasive Plant Council) and fauna species (e.g., American bullfrog [*Lithobates catesbeianus*]) that could pose a threat to vernal pool vegetation or invertebrate communities.
- 8.34.5. Inoculum shall not be collected from vernal pools known to support or found to support succulent owl's-clover (*Castilleja campestris* spp. *succulenta*) or other state-listed plants.
- 8.34.6. Inoculum shall be collected manually or by using a small, rubber-tired tractor to minimize disturbance to vernal pools.
- 8.34.7. A maximum of ten percent of each donor vernal pool's area shall be used for inoculum collection.

- 8.34.8. Inoculum collection shall be limited to no greater than one inch in depth to minimize disturbance to the donor vernal pools. Once inoculum is collected from a vernal pool, any scraped areas shall be smoothed out.

8.35. Riparian Restoration Area.

- 8.35.1. Riparian habitat restoration shall be limited to three acres within the 4.09-acre Riparian Restoration Area.
- 8.35.2. Permittee shall prepare and maintain GIS shapefile layers and associated maps depicting mapped areas of all restoration activities within the Riparian Restoration Area. Permittee shall provide the above information to CDFW with the Monthly Compliance Report.
- 8.35.3. Permittee shall document the cumulatively disturbed acreages of the Riparian Restoration Area at the Mitigation Site. Permittee shall provide the above information to CDFW with the Monthly Compliance Report.
- 8.35.4. Collection of canes from established trees to be used for replanting shall be limited to 10 canes per tree and shall be collected between November and February.
- 8.35.5. Holes for replanting the canes shall be excavated using a small tractor with an attached auger.
- 8.35.6. Holes for container plants shall be excavated approximately three times the width and two times the height of the container size.
- 8.35.7. Installation of the temporary irrigation system shall be accomplished by hand using a utility truck to transport pipe to the Riparian Restoration Area. The temporary irrigation system shall be removed when plantings are sufficiently established and irrigation is no longer needed.
- 8.35.8. Riparian Restoration Area activities shall be limited to the use of hand tools, an auger mounted on a small tractor, and personal and light-duty trucks to transport and plant riparian trees and shrubs.
- 8.35.9. During riparian restoration, equipment shall be stored within a 0.23-acre area on the bluff outside of the Chowchilla River floodplain directly adjacent to the Riparian Restoration Area. The area shall not be scraped or otherwise cleared.

8.35.10. All Riparian Restoration Area Covered Activities shall occur outside the OHWM and be limited to those areas along the Chowchilla River channel corridor. Trucks and other equipment shall remain on the upland side of the OHWM.

8.35.11. No grading shall occur as part of the Riparian Restoration Area activities.

8.36. Specific Measures for CTS at the Mitigation Site.

8.36.1. Wetland Development and Riparian Restoration Plan. The Permittee shall prepare and submit to CDFW a Wetland Development and Riparian Restoration Plan (Plan) for review and written approval prior to starting any CTS breeding pond creation or riparian restoration activities at the Mitigation Site. The creation and restoration activities shall occur within a maximum 115.18-acre Wetland Restoration Area, a 4.09-acre Riparian Restoration Area, a 2.0-acre Inoculum Collection Area, and a 1.23-acre Staging Area.

8.36.2. CTS at the Mitigation Site. If CTS is found by any person at the Mitigation Site before or during Covered Activities, all work that could potentially harm the CTS shall stop immediately until the Designated Biologist(s) can relocate the CTS following the CTS Salvage and Relocation Plan specified in Condition of Approval 8.13.1 above. The relocation area(s) shall be identified in the CTS Salvage and Relocation Plan by the Designated Biologist(s) prior to the start of Covered Activities and are subject to CDFW approval.

8.36.3. CTS Record of Handling at the Mitigation Site. All CTS captures, relocations, and observations by the Designated Biologist(s) at the Mitigation Site shall include the following documented information: the date, time, and location of each occurrence using GPS technology; the name of the party that actually identified the CTS; circumstances of the incident; the general condition and health of each individual; any diagnostic markings, sex, age (juvenile or adult); actions undertaken; and habitat description. Permittee shall also submit this information to the CNDDB as per Condition of Approval 7.9. This information shall also be included in the Monthly Compliance Reports and Final Mitigation Report.

8.36.4. Burrow Avoidance and Excavation at the Mitigation Site. Potential CTS burrows shall be avoided by at least 50 feet during all Covered Activities at the Mitigation Site to prevent the collapse of the burrow openings, the burrow system, or otherwise entombing or crushing CTS. If burrows

cannot be avoided, then they shall be hand excavated in accordance with Condition of Approval 8.13.4 and any CTS uncovered during burrow excavation shall be captured and relocated in accordance with the CDFW-approved CTS Salvage and Relocation Plan as described in Condition of Approval 8.13.1 above.

- 8.36.5. Dry Season Work at the Mitigation Site. Fill or other ground-disturbing activities at the Mitigation Site shall be confined to the dry season from June 15th to October 31st.
- 8.36.6. Rain Forecast at the Mitigation Site. The Designated Biologist(s) and Permittee shall monitor the National Weather Service 72-hour forecast for the Mitigation Site. If a 70 percent or greater chance of rainfall is predicted within 72 hours, Permittee shall cease all Covered Activities at the Mitigation Site where initial ground disturbance (vegetation removal, grading, excavation, etc.) has yet to occur until zero percent chance of rain is forecast. Work may continue 24 hours after the rain ceases and there is zero percent chance of precipitation in the 72-hour forecast.
- 8.36.7. Soil Stockpiles at the Mitigation Site. Permittee shall ensure that soil stockpiles at the Mitigation Site are placed where soil will not pass into potential CTS breeding pools or into any other "Waters of the State," in accordance with Fish and Game Code section 5650. Permittee shall appropriately protect stockpiles to prevent soil erosion.
- 8.36.8. Fieldwork Code of Practice. To ensure that disease is not conveyed between Work Areas the Designated Biologist(s) shall follow the Fieldwork Code of Practice developed by the Declining Amphibian Populations Task Force (Attachment 2). The Designated Biologist(s) may substitute a bleach solution (0.5 to one cup of bleach to one gallon of water) for the ethanol solution. Care shall be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.
- 8.37. Specific Measures for SWHA at the Mitigation Site.
 - 8.37.1. Pre-construction SWHA Surveys at the Mitigation Site. The Designated Biologist(s) shall conduct pre-construction surveys at the Mitigation Site during the SWHA nesting season (February 15th through September 15th), prior to conducting Covered Activities in each Work Area. Pre-construction surveys shall occur no more than 30 days prior to beginning Covered Activities, and shall include a 0.5-mile buffer around each Work Area. The Designated Biologist(s) shall survey all suitable habitat/nest trees for

nesting SWHA. The Designated Biologist(s) or Designated Representative shall provide the nesting season survey results to CDFW in a written report no more than five days prior to beginning Covered Activities.

- 8.37.2. SWHA Nest Buffer at the Mitigation Site. The Permittee and Designated Biologist(s) shall ensure that no Covered Activities occur within 100 feet of a SWHA nest during the nesting season (February 15th through September 15th) at the Mitigation Site.
- 8.37.3. SWHA Nest Buffer and Monitoring at the Mitigation Site. If a nesting SWHA is found in a work area or the 0.5-mile Work Area buffer (See Condition of Approval 8.37.1), the Designated Biologist(s) shall be present daily for the entire duration of any Covered Activities within the Work Area to monitor the behavior of the potentially affected SWHA. The Designated Biologist(s) shall have the authority to order the cessation of all Covered Activities if the bird(s) exhibits distress and/or abnormal nesting behavior (swooping/stooping, excessive vocalization [distress calls], agitation, failure to remain on nest, failure to deliver prey items for an extended time period, etc.) which may cause reproductive failure (nest abandonment and loss of eggs and/or young). Permittee shall not resume Covered Activities until CDFW has been consulted by the Designated Biologist(s), and both the Designated Biologist(s) and CDFW confirm that the bird's behavior has normalized.
- 8.37.4. Tree and Woody Shrub Removal at the Mitigation Site. Permittee shall limit removal of trees and woody shrubs at the Mitigation Site to between September 16th and February 14th of any year.
- 8.38. Specific Measures for SJKF at the Mitigation Site.
- 8.38.1. SJKF Survey at the Mitigation Site. No more than 30 days prior to Permittee beginning Covered Activities in each Mitigation Site Work Area, the Designated Biologist(s) shall perform a pre-construction survey for SJKF dens (potential, known, active, atypical, and natal) in the particular Work Area. The pre-construction survey shall cover the Work Area and a buffer zone of 500 feet in size beyond the Work Area's boundaries.
- 8.38.2. SJKF Den Avoidance at the Mitigation Site. If a potential SJKF den is discovered or a SJKF is found in an "atypical" den such as a pipe or culvert at the Mitigation Site, a minimum 50-foot buffer around the "atypical" den shall be established using flagging. If a known SJKF den is discovered at the Mitigation Site, Permittee shall establish a minimum

buffer of at least 100 feet around the den using fencing. If a natal den is discovered at the Mitigation Site, a buffer of at least 200 feet around the den using fencing or flagging shall be established. For any natal dens with pups at the Mitigation Site, the den shall have a buffer of at least 500 feet around it using fencing or flagging. Buffer zones shall be considered Environmentally Sensitive Areas, and no Covered Activities are allowed within a buffer except per Condition of Approval 8.38.3. The Permittee shall notify the USFWS and CDFW's Regional Representative immediately via telephone or e-mail if any SJKF active dens, natal dens, or occupied atypical dens are discovered within or immediately adjacent to any Mitigation Site Work Area.

- 8.38.3. SJKF Den Excavation at the Mitigation Site. For active dens and potential dens that exhibit signs of SJKF use or characteristics suggestive of SJKF dens (including dens in natural substrate and in/under man-made structures) within the portion of the Mitigation Site Work Area to be disturbed and that cannot be avoided as per Condition of Approval 8.38.2, and if, after four consecutive days of monitoring with tracking medium or infrared camera, the Designated Biologist(s) has determined that SJKF is not currently present, the den may be excavated. Potential SJKF dens without any signs of SJKF use at the Mitigation Site may be excavated under the supervision of the Designated Biologist(s) without advance tracking or camera monitoring. Natal dens at the Mitigation Site shall not be excavated until the pups and adults have vacated and then only after consultation with the USFWS and CDFW. If the excavation process reveals evidence of current use by SJKF then den excavation shall cease immediately and tracking or camera monitoring as described above shall be conducted/resumed. Excavation of the den may be completed when, in the judgment of the Designated Biologist(s), the SJKF has escaped from the partially excavated den. SJKF dens shall be carefully excavated until it is certain no individuals of SJKF are inside. Dens shall be fully excavated, filled with dirt and compacted to ensure that SJKF cannot reenter or use the den during Covered Activities. If an individual SJKF does not vacate a den within the Work Area within a reasonable timeframe, Permittee shall contact USFWS and CDFW and get written guidance (e-mail will suffice) from both agencies prior to proceeding with den excavation.
- 8.38.4. SJKF Den Replacement Plan at the Mitigation Site. Within ten days of fully excavating a den, filling it with dirt, and compacting it (see Condition of Approval 8.38.3), Permittee shall replace each excavated known, active, and natal den at the Mitigation Site with an artificial den to compensate for the loss of important shelter used by SJKF for protection, reproduction,

and escape from predators in accordance with the CDFW-approved SJKF Den Replacement Plan (see Condition of Approval 8.15.4).

Construction Footprint O&M Activities

- 8.39. O&M Activity Requirement. Permittee shall implement all General Provisions set forth in Condition of Approval 6 of this ITP for O&M Covered Activities.
- 8.40. O&M Quarterly Status Report. Permittee shall provide CDFW with an O&M Quarterly Status Report (O&M QSR) no later than the 15th day of January, March, June, and September beginning with issuance of this ITP and continuing until the expiration of this ITP. Each O&M QSR shall include, at a minimum: (1) a summary of all O&M Covered Activities completed for that quarter; (2) a general description of the status of the O&M Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating O&M Covered Activities impacts; (5) all available information about O&M-related incidental take of the Covered Species; (6) information about other O&M impacts on the Covered Species; (7) updates to the mapped areas of all land disturbances and mapped areas of identified habitat features suitable for Covered Species within the Work Area in accordance with Condition of Approval 7.4 above; 8) a summary of findings from pre-construction surveys (e.g., number of times a Covered Species or a den, burrow, or nest was encountered, location, if avoidance was achieved, if not, what other measures were implemented); 9) beginning and ending dates of O&M Covered Activities undertaken during the reporting quarter; and 10) a summary of the cumulative status of the disturbed acreages of all land disturbances and identified habitat features for each of the Covered Species within the Project Area, both for the preceding quarter and a total since ITP issuance, and the acreages of all land and identified habitat features anticipated to be disturbed over the succeeding quarter in accordance with Conditions of Approval 7.4 and 7.5 above.
- 8.41. Pre-O&M Covered Activities Clearance Surveys. Prior to starting any ground- or vegetation-disturbing O&M Covered Activities during the CTS breeding season (November 1st through March 31st) in each Work Area located within 1.3 miles of known or potential breeding habitat or within known or potential breeding habitat, the Designated Biologist(s) shall survey the Work Area for CTS. If any CTS are found, the Designated Biologist(s) shall relocate them from the Work Area in accordance with the CDFW-approved CTS Salvage and Relocation Plan (see Condition of Approval 8.13.1). Only approved Designated Biologist(s) are authorized to capture and handle the Covered Species.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

- 8.42. CTS in O&M Work Area(s). If any CTS are found in a Work Area during O&M Covered Activities, all Covered Activities that could potentially harm CTS shall stop immediately until the Designated Biologist(s) can relocate the CTS following the CTS Salvage and Relocation Plan in accordance with Condition of Approval 8.13.1.
- 8.43. CTS Record of Handling for O&M Work Areas. All CTS captures, relocations, and observations by the Designated Biologist(s) during Covered Activities in O&M Work Areas shall include the following documented information: the date, time, and location of each occurrence using GPS technology; the name of the party that actually identified the CTS; circumstances of the incident; the general condition and health of each individual; any diagnostic markings, sex, age (juvenile or adult); actions undertaken; and habitat description. Permittee shall also submit this information to the CNDDB as per Condition of Approval 7.9. This information shall also be included in the O&M QSR and Final Mitigation Report.
- 8.44. O&M Covered Activities Rain Forecast. The Designated Biologist(s) and Permittee shall monitor the National Weather Service 72-hour forecast for the Project Area. If a 70 percent or greater chance of rainfall is predicted within 72 hours, Permittee shall cease all ground-disturbing O&M Covered Activities. Work may continue 24 hours after the rain ceases and there is zero percent chance of precipitation in the 72-hour forecast. If work must continue when rain is forecast, the Designated Biologist(s) shall survey the area and capture and relocate any CTS that are discovered. The individuals shall be relocated in accordance with the CDFW-approved CTS Salvage and Relocation Plan (see Condition of Approval 8.13.1).
- 8.45. O&M Pre-construction SWHA Surveys. The Designated Biologist(s) shall conduct pre-construction surveys in the O&M Work Areas during the SWHA nesting season (February 15th through September 15th), prior to conducting Covered Activities in each Work Area. Pre-construction surveys shall occur no more than 30 days prior to beginning O&M Covered Activities, and shall include a 0.5-mile buffer around each Work Area. The Designated Biologist(s) shall survey all suitable habitat/nest trees for nesting SWHA. The Designated Biologist(s) or Designated Representative shall provide the nesting season survey results to CDFW in a written report no more than five days prior to beginning Covered Activities.
- 8.46. O&M Nesting SWHA Nest Buffer. The Permittee and Designated Biologist(s) shall ensure that no O&M Covered Activities occur within 100 feet of a SWHA nest during the nesting season (February 15th through September 15th).

- 8.47. O&M SWHA Nest Buffer and Monitoring. If a nesting SWHA is found in the O&M Work Area or the 0.5-mile Work Area buffer (see Condition of Approval 8.14.1), including access routes, the Designated Biologist(s) shall be present daily for the entire duration of any ground disturbing Covered Activities to monitor the behavior of the potentially affected SWHA. The Designated Biologist(s) shall have the authority to order the cessation of all Covered Activities if the bird(s) exhibits distress and/or abnormal nesting behavior (swooping/stooping, excessive vocalization [distress calls], agitation, failure to remain on nest, failure to deliver prey items for an extended time period, etc.) which may cause reproductive failure (nest abandonment and loss of eggs and/or young). Permittee shall not resume ground disturbing Covered Activities until CDFW has been consulted by the Designated Biologist(s), and both the Designated Biologist(s) and CDFW confirm that the bird's behavior has normalized.
- 8.48. O&M Tree and Woody Shrub Removal. Permittee shall prohibit removal of trees and woody shrubs in the O&M Work Area(s) to between September 16th and February 14th of any year.
- 8.49. O&M SJKF Survey. No more than 30 days prior to Permittee beginning Covered Activities in each O&M Work Area, the Designated Biologist(s) shall perform a pre-construction survey for SJKF dens (potential, known, active, atypical, and natal) in the particular Work Area. The pre-construction survey shall cover the O&M Work Area(s) and a buffer zone of 500 feet in size beyond the Work Area's boundaries.
- 8.50. O&M SJKF Den Avoidance. If a potential SJKF den is discovered or a SJKF is found in an "atypical" den such as a pipe or culvert in the O&M Work Area(s), a minimum 50-foot buffer around the "atypical" den shall be established using flagging. If a known SJKF den is discovered in the Work Area(s), Permittee shall establish a minimum buffer of at least 100 feet around the den using fencing. If a natal den is discovered in the Work Area(s), a buffer of at least 200 feet around the den using fencing or flagging shall be established. For any natal dens with pups in the Work Area(s), the den shall have a buffer of at least 500 feet around it using fencing or flagging. Buffer zones shall be considered Environmentally Sensitive Areas, and no O&M Covered Activities are allowed within a buffer except per Condition of Approval 8.51. The Permittee shall notify the USFWS and CDFW's Regional Representative immediately via telephone or e-mail if any SJKF active dens, natal dens, or occupied atypical dens are discovered within or immediately adjacent to any O&M Work Area.
- 8.51. O&M SJKF Den Excavation. For active dens and potential dens that exhibit signs of SJKF use or characteristics suggestive of SJKF dens (including dens in natural

substrate and in/under man-made structures) within the portion of the O&M Work Area(s) to be disturbed and that cannot be avoided as per Condition of Approval 8.50, and if, after four consecutive days of monitoring with tracking medium or infrared camera, the Designated Biologist(s) has determined that SJKF is not currently present, the den may be excavated. Potential SJKF dens without any signs of SJKF use in the O&M Work Area(s) may be excavated under the supervision of the Designated Biologist(s) without advance tracking or camera monitoring. Natal dens at the O&M Work Area(s) shall not be excavated until the pups and adults have vacated and then only after consultation with the USFWS and CDFW. If the excavation process reveals evidence of current use by SJKF then den excavation shall cease immediately and tracking or camera monitoring as described above shall be conducted/resumed. Excavation of the den may be completed when, in the judgment of the Designated Biologist(s), the SJKF has escaped from the partially excavated den. SJKF dens shall be carefully excavated until it is certain no individuals of SJKF are inside. Dens shall be fully excavated, filled with dirt and compacted to ensure that SJKF cannot reenter or use the den during O&M Covered Activities. If an individual SJKF does not vacate a den within the O&M Work Area(s) within a reasonable timeframe, Permittee shall contact USFWS and CDFW and get written guidance (e-mail will suffice) from both agencies prior to proceeding with den excavation.

- 8.52. O&M SJKF Den Replacement. Within 30 days of fully excavating a den, filling it with dirt, and compacting it (see Condition of Approval 8.51), Permittee shall replace each excavated known, active, and natal den in the O&M Work Area(s) with an artificial den to compensate for the loss of important shelter used by SJKF for protection, reproduction, and escape from predators in accordance with the CDFW-approved SJKF Den Replacement Plan (see Condition of Approval 8.15.4).
- 8.53. O&M Soil Stockpiles. Permittee shall ensure that soil stockpiles in the O&M Work Area(s) are placed where soil will not pass into potential CTS breeding pools or into any other "Waters of the State," in accordance with Fish and Game Code section 5650. Permittee shall appropriately protect stockpiles to prevent soil erosion.
- 8.54. O&M Vehicle Access. Permittee shall ensure all O&M Covered Activities are conducted utilizing access routes developed specifically for ingress and egress access to the Work Area(s). In the event emergency response requires vehicular access through areas outside of the Work Area(s), Permittee shall notify CDFW within 48 hours by calling the Regional Office at (559) 243-4005.

- 8.55. O&M Materials Inspection. Workers shall thoroughly inspect for Covered Species in all construction pipe, culverts, or similar structures with a diameter of 7.6 centimeters (three inches) or greater that are stored for one or more overnight periods before the structure is subsequently moved, buried, or capped. If during inspection one of these animals is discovered inside the structure, workers shall notify the Designated Biologist(s) and allow the Covered Species to safely escape that section of the structure before moving and utilizing the structure.
- 8.56. O&M Equipment Inspection. Workers shall inspect for Covered Species under vehicles and equipment at the O&M Work Area(s) before the vehicles and equipment are moved. If a Covered Species is present, the worker shall notify the Designated Biologist(s) and wait for the Covered Species to move unimpeded to a safe location. Alternatively, the Permittee shall contact the Designated Biologist(s) to determine if the Designated Biologist(s) can safely move the Covered Species out of harm's way in compliance with this ITP.
- 8.57. O&M Daily Entrapment Inspections. The Designated Biologist(s) shall inspect all open holes, sumps, and trenches within each O&M Work Area at the beginning, middle, and end of each day for trapped Covered Species. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively working in the excavation and at the end of each work day. To prevent inadvertent entrapment of Covered Species or any other animals, the Designated Biologist(s) shall oversee the covering of all excavated, trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that Covered Species are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning, mid-day, the end of each day (including weekends and any other non-work days), and immediately before trenches, holes, sumps, or other excavations are back-filled, the Designated Biologist(s) shall thoroughly inspect them for trapped Covered Species. Trenches, holes, sumps, or other excavations that are covered long-term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that Covered Species have become trapped, Permittee shall cease all Covered Activities in the

vicinity and notify the Designated Biologist(s) immediately. Project workers and the Designated Biologist(s) shall allow the Covered Species to escape unimpeded if possible before Covered Activities are allowed to continue, or, if the Covered Species is CTS, the Designated Biologist(s) shall capture and relocated the animal as per the CTS Salvage and Relocation Plan described in Condition of Approval 8.13.1.

9. Habitat Management Land Acquisition:

CDFW has determined that permanent protection and perpetual management of compensatory habitat is necessary and required pursuant to CESA to fully mitigate Project-related impacts of the taking on the Covered Species that will result with implementation of the Covered Activities. This determination is based on factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and CDFW's estimate of the acreage required to provide for adequate compensation.

To meet this requirement, the Permittee shall either purchase 234 acres of Covered Species credits from the CDFW-approved Dutchman Creek Conservation Bank (Condition of Approval 9.2) OR shall provide for both the permanent protection and management of 234 acres of Habitat Management (HM) lands within the Preservation Area at Lazy K Ranch pursuant to Condition of Approval 9.3 below and the calculation and deposit of the management funds pursuant to Condition of Approval 9.4 below.

As demonstrated through biological resource surveys, the CDFW-approved Dutchman Creek Mitigation Bank and the Lazy K Ranch both have aquatic and upland habitat for CTS, nesting and foraging habitat for SWHA, and foraging, denning, and dispersal habitat for SJKF. Both the 234 acres of Covered Species habitat at the Dutchman Creek Mitigation Bank and at the Lazy K Ranch consist of high quality vernal pool, upland grassland, and riparian habitat. Occurrences of CTS and SWHA have been documented on the Dutchman Creek Mitigation Bank and at the Lazy K Ranch. Based on this information, the habitat values present within and adjacent to the 234 acres at the Dutchman Creek Mitigation Bank and the Lazy K Ranch are of a superior quality for the Covered Species to function as aquatic breeding and upland refugia habitat for CTS, foraging grassland and nesting tree habitat for SWHA, and foraging, denning, and dispersal habitat for SJKF compared to the habitat value of the 304.47 acres of Covered Species habitat to be permanently impacted by the Project (Table 6). Permanent protection and funding for perpetual management of compensatory habitat must be complete before starting Covered Activities or within 18 months of the start of Project construction, as documented in the Notification Before Commencement submitted pursuant to Condition of Approval 7.1 if Security is provided pursuant to Condition of Approval 10 below for all uncompleted obligations.

Table 6. Compensatory Mitigation Acres for Covered Species

Impact Type	Acres
<i>California Tiger Salamander</i>	
Indirect Temporary Breeding Habitat	2.26
Direct Permanent Upland Refugia/Foraging Habitat	72.82
Total Impacts	75.08
Total Compensatory Mitigation	149.0
<i>Swainson's Hawk</i>	
Direct Permanent Foraging Habitat	164.96
Direct Permanent Nesting Habitat	1 nest tree
Total Impacts	164.96
Total Compensatory Mitigation	170.0
<i>San Joaquin Kit Fox</i>	
Direct Permanent Preferred Foraging/Dispersal Habitat	54.29
Direct Permanent Marginal Dispersal Habitat	250.18
Total Impacts	304.47
Total Compensatory Mitigation	234.0

9.1. Cost Estimates. CDFW has estimated the cost of acquisition, protection, and perpetual management of the HM lands as follows:

- 9.1.1. Land acquisition costs for HM lands identified in Condition of Approval 9.3 below, estimated at \$5,025.93/acre for 234 acres: **\$1,176,067.62**. Land acquisitions costs are estimated using local fair market current value for lands with habitat values meeting mitigation requirements;
- 9.1.2. Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 9.3.5 below, estimated at **\$365,047.93**;
- 9.1.3. Interim management period funding as described in Condition of Approval 9.3.6 below, estimated at **\$56,020.84**;
- 9.1.4. Long-term management funding as described in Condition of Approval 9.4 below, estimated at \$5,806.00/acre for 234 acres: **\$1,358,604.00**. Long-term management funding is estimated initially for the purpose of providing Security to ensure implementation of HM lands management.

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

- 9.1.5. Related transaction fees including but not limited to account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW as described in Condition of Approval 9.5, estimated at **\$12,000.00**.

- 9.2. Covered Species Credits. Permittee shall purchase 234 acres of Covered Species credits from the CDFW-approved Dutchman Creek Mitigation Bank prior to initiating Covered Activities, or no later than 18 months from the start of Project construction, as documented in the Notification Before Commencement submitted pursuant to Condition of Approval 7.1 if Security is provided pursuant to Condition of Approval 10 below.

OR:

- 9.3. Habitat Acquisition and Protection. To provide for the acquisition and perpetual protection and management of the HM lands, the Permittee shall:

- 9.3.1. Fee Title/Conservation Easement. Transfer fee title to the HM lands to CDFW pursuant to terms approved in writing by CDFW. Alternatively, CDFW, in its sole discretion, may authorize a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property provided that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended. If CDFW does not hold fee title to the HM lands, CDFW shall act as grantee for a conservation easement over the HM lands or shall, in its sole discretion, approve a non-profit entity, public agency, or Native American tribe to act as grantee for a conservation easement over the HM lands provided that the entity, agency, or tribe meets the requirements of Civil Code section 815.3. If CDFW does not hold the conservation easement, CDFW shall be expressly named in the conservation easement as a third-party beneficiary. The Permittee shall obtain CDFW written approval of any conservation easement before its execution or recordation. No conservation easement shall be approved by CDFW unless it complies with Government Code sections 65965-65968, as amended and includes provisions expressly addressing Government Code sections 65966(j) and 65967(e);

- 9.3.2. HM Lands Approval. Obtain CDFW written approval of the HM lands before acquisition and/or transfer of the land by submitting, at least three months before acquisition and/or transfer of the HM lands, a formal

Proposed Lands for Acquisition Form (see Attachment 3B) identifying the land to be purchased or property interest conveyed to an approved entity as mitigation for the Project's impacts on Covered Species;

- 9.3.3. HM Lands Documentation. Provide a recent preliminary title report, initial hazardous materials survey report, and other necessary documents (see Attachment 3A). All documents conveying the HM lands and all conditions of title are subject to the approval of CDFW, and if applicable, the Wildlife Conservation Board and the Department of General Services;
- 9.3.4. Land Manager. Designate both an interim and long-term land manager approved by CDFW. The interim and long-term land managers may, but need not, be the same. The interim and/or long-term land managers may be the landowner or another party. Documents related to land management shall identify both the interim and long-term land managers. Permittee shall notify CDFW of any subsequent changes in the land manager within 30 days of the change. If CDFW will hold fee title to the mitigation land, CDFW will also act as both the interim and long-term land manager unless otherwise specified.
- 9.3.5. Start-up Activities. Provide for the implementation of start-up activities, including the initial site protection and enhancement of HM lands, once the HM lands have been approved by CDFW. Start-up activities include, at a minimum: (1) preparing a final management plan for CDFW approval (see <http://www.dfg.ca.gov/habcon/conplan/mitbank/>); (2) conducting a baseline biological assessment and land survey report within four months of recording or transfer; (3) developing and transferring GIS data if applicable; (4) establishing initial fencing; (5) conducting litter removal; (6) conducting initial habitat restoration or enhancement, if applicable; and (7) installing signage.
- 9.3.6. Interim Management (Initial and Capital). Provide for the interim management of the HM lands. The Permittee shall ensure that the interim land manager implements the interim management of the HM lands as described in the final management plan and conservation easement approved by CDFW. The interim management period shall be a minimum of three years from the date of HM land acquisition and protection and full funding of the Endowment and includes expected management following start-up activities. Interim management period activities described in the final management plan shall include fence repair, continuing trash removal, site monitoring, and vegetation and invasive species management. Permittee shall either (1) provide a security to CDFW for the

minimum of three years of interim management that the land owner, Permittee, or land manager agrees to manage and pay for at their own expense, (2) establish an escrow account with written instructions approved in advance in writing by CDFW to pay the land manager annually in advance, or (3) establish a short-term enhancement account with CDFW or a CDFW-approved entity for payment to the land manager.

- 9.4. Endowment Fund. If the Permittee will permanently protect and perpetually manage compensatory habitat as described in Condition of Approval 9.3, the Permittee shall ensure that the HM lands are perpetually managed, maintained, and monitored by the long-term land manager as described in this ITP, the conservation easement, and the final management plan approved by CDFW. After obtaining CDFW approval of the HM lands, Permittee shall provide long-term management funding for the perpetual management of the HM lands by establishing a long-term management fund (Endowment). The Endowment is a sum of money, held in a CDFW-approved fund that provides funds for the perpetual management, maintenance, monitoring, and other activities on the HM lands consistent with the management plan(s) required by Condition of Approval 9.3.5. Endowment as used in this ITP shall refer to the endowment deposit and all interest, dividends, other earnings, additions and appreciation thereon. The Endowment shall be governed by this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended.

After the interim management period, Permittee shall ensure that the designated long-term land manager implements the management and monitoring of the HM lands according to the final management plan. The long-term land manager shall be obligated to manage and monitor the HM lands in perpetuity to preserve their conservation values in accordance with this ITP, the conservation easement, and the final management plan. Such activities shall be funded through the Endowment.

- 9.4.1. Identify an Endowment Manager. The Endowment shall be held by the Endowment Manager, which shall be either CDFW or another entity qualified pursuant to Government Code sections 65965-65968, as amended. Permittee shall submit to CDFW a written proposal that includes: (i) the name of the proposed Endowment Manager; (ii) whether the proposed Endowment Manager is a governmental entity, special district, nonprofit organization, community foundation, or congressionally chartered foundation; (iii) whether the proposed Endowment Manager holds the property or an interest in the property for conservation purposes as required by Government Code section 65968(b)(1) or, in the alternative,

the basis for finding that the Project qualifies for an exception pursuant to Government Code section 65968(b)(2); and (iv) a copy of the proposed Endowment Manager's certification pursuant to Government Code section 65968(e). Within 30 days of CDFW's receipt of Permittee's written proposal, CDFW shall inform Permittee in writing if it determines the proposal does not satisfy the requirements of Fish and Game Code section 2081(b)(4) and, if so, shall provide Permittee with a written explanation of the reasons for its determination. If CDFW does not provide Permittee with a written determination within the 30 day period, the proposal shall be deemed consistent with Section 2081(b)(4).;

9.4.2. Calculate the Endowment Funds Deposit. After obtaining CDFW written approval of the HM lands, long-term management plan, and Endowment Manager, Permittee shall prepare a Property Analysis Record (PAR) or PAR-equivalent analysis (hereinafter "PAR") to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). The Permittee shall submit to CDFW for review and approval the results of the PAR before transferring funds to the Endowment Manager.

9.4.2.1. Capitalization Rate and Fees. Permittee shall obtain the capitalization rate from the selected Endowment Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees.

9.4.2.2. Endowment Buffers/Assumptions. Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment:

9.4.2.2.1. Ten Percent Contingency. A ten percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.

9.4.2.2.2. Three Years Delayed Spending. The endowment shall be established assuming spending will not occur for the first three years after full funding.

9.4.2.2.3. Non-annualized Expenses. For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual

disbursement until the year of anticipated need or upon request to Endowment Manager and CDFW.

- 9.4.3. Transfer Long-term Endowment Funds. Permittee shall transfer the long-term endowment funds to the Endowment Manager upon CDFW approval of the Endowment Deposit Amount identified above. The approved Endowment Manager may pool the Endowment with other endowments for the operation, management, and protection of HM lands for local populations of the Covered Species but shall maintain separate accounting for each Endowment. The Endowment Manager shall, at all times, hold and manage the Endowment in compliance with this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended.

- 9.5. Reimburse CDFW. Permittee shall reimburse CDFW for all reasonable expenses incurred by CDFW such as transaction fees, account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW.

10. Performance Security

The Permittee may proceed with Covered Activities only after the Permittee has ensured funding (Security) to complete any activity required by Condition of Approval 9 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:

- 10.1. Security Amount. The Security shall be in the amount of **\$2,967,740.39**. This amount is based on the cost estimates identified in Condition of Approval 9.1 above.
- 10.2. Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 4) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.
- 10.3. Security Timeline. The Security shall be provided to CDFW before Covered Activities begin or within 180 days after the effective date of this ITP, whichever occurs first.
- 10.4. Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.
- 10.5. Security Transmittal. If CDFW holds the Security, Permittee shall transmit it to

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 5) or by way of an approved instrument such as escrow, irrevocable letter of credit, or other.

- 10.6. Security Drawing. If CDFW holds the Security, it shall allow CDFW to draw on the principal sum if CDFW, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP.
- 10.7. Security Release. If CDFW holds the Security, it (or any portion of the Security then remaining) shall be released to the Permittee after CDFW has conducted an on-site inspection and received confirmation that all secured requirements have been satisfied, as evidenced by:
- Written documentation of the acquisition of the HM lands;
 - Copies of all executed and recorded conservation easements;
 - Written confirmation from the approved Endowment Manager of its receipt of the full Endowment; and
 - Timely submission of all required reports.

Even if Security is provided under this Condition of Approval 10, the Permittee must complete the required acquisition, protection and transfer of all HM lands and record any required conservation easements no later than 18 months from the start of Project construction, as documented in the Notification Before Commencement submitted pursuant to Condition of Approval 7.1. CDFW may require the Permittee to provide additional HM lands and/or additional funding to ensure the impacts of the taking are minimized and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.

Amendment:

This ITP may be amended as provided by California Code of Regulations, Title 14, section 783.6, subdivision (c), and other applicable law. This ITP may be amended without the concurrence of the Permittee as required by law, including if CDFW determines that continued implementation of the Project as authorized under this ITP would jeopardize the continued existence of the Covered Species or where Project changes or changed biological conditions necessitate an ITP amendment to ensure that all Project-related impacts of the taking to the Covered Species are minimized and fully mitigated.

Stop-Work Order:

CDFW may issue Permittee a written stop-work order requiring Permittee to suspend any Covered Activity for an initial period of up to 25 days to prevent or remedy a violation of this ITP, including but not limited to the failure to comply with reporting or monitoring obligations, or to prevent the unauthorized take of any CESA endangered, threatened, or candidate

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

species. Permittee shall stop work immediately as directed by CDFW upon receipt of any such stop-work order. Upon written notice to Permittee, CDFW may extend any stop-work order issued to Permittee for a period not to exceed 25 additional days. Suspension and revocation of this ITP shall be governed by California Code of Regulations, Title 14, section 783.7, and any other applicable law. Neither the Designated Biologist(s) nor CDFW shall be liable for any costs incurred in complying with stop-work orders.

Compliance with Other Laws:

This ITP sets forth CDFW's requirements for the Permittee to implement the Project pursuant to CESA. This ITP does not necessarily create an entitlement to proceed with the Project. Permittee is responsible for complying with all other applicable federal, state, and local law.

Notices:

The Permittee shall deliver a fully executed duplicate original ITP by registered first class mail or overnight delivery to the following address:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
1416 Ninth Street, Suite 1260
Sacramento, California 95814

Written notices, reports and other communications relating to this ITP shall be delivered to CDFW by registered first class mail at the following address, or at addresses CDFW may subsequently provide the Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number 2081-2013-025-04 in a cover letter and on any other associated documents.

Original cover with attachment(s) to:

Jeffrey R. Single, Ph.D., Regional Manager
California Department of Fish and Wildlife
1234 East Shaw Avenue
Fresno, California 93710
Telephone (559) 243-4005
Fax (559) 243-4022

Unless Permittee is notified otherwise, CDFW's Regional Representative for purposes of addressing issues that arise during implementation of this ITP is:

Sarah Boogay
California Department of Fish and Wildlife
1234 East Shaw Avenue
Fresno, California 93710

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

Telephone (559) 243-4014, extension 309
Fax (559) 243-3004
Sarah.Boogay@wildlife.ca.gov

Compliance with the California Environmental Quality Act:

CDFW's issuance of this ITP is subject to the California Environmental Quality Act (CEQA). CDFW is a responsible agency pursuant to CEQA with respect to this ITP because of prior environmental review of the Project by the lead agency, the California High Speed Rail Authority. (See generally Pub. Resources Code, §§ 21067, 21069.) The lead agency's prior environmental review of the Project is set forth in the California High-Speed Train: Merced to Fresno Section Final Project Environmental Impact Report/Environmental Impact Statement (EIR/EIS), (State Clearinghouse No. 2009091125) dated April 2012 that the Authority certified for the California High-Speed Train Project Merced to Fresno Section on May 3, 2012, Biological Resources and Wetlands Technical Report (April 2012), Wetlands Delineation Report dated April 2012, Noise and Vibration Technical Report dated April 2012, Addendum 2013-1 to the Final Merced to Fresno Project Section EIR/EIS dated October 2013, and Addendum 2013-2 to the Final Merced to Fresno Section Project EIR/EIS dated November 2013. At the time the lead agency certified the EIR/EIS and approved the Project it also adopted various mitigation measures for the Covered Species as conditions of Project approval.

This ITP, along with CDFW's related CEQA findings, which are available as a separate document, provide evidence of CDFW's consideration of the lead agency's EIR/EIS for the Project and the environmental effects related to issuance of this ITP (CEQA Guidelines, § 15096, subd. (f)).

Findings Pursuant to CESA:

CESA and CDFW's related implementing regulations require CDFW to prepare and adopt specific findings under CESA prior to and in connection with the issuance of this ITP. (See, e.g. Fish & G. Code § 2081, subs. (b)-(c); Cal. Code Regs., tit. 14, §§ 783.4, subds, (a)-(b), 783.5, subd. (c)(2).) CDFW's CESA findings for this ITP are available in a separate document as adopted by CDFW.

Attachments:

EXHIBIT 1	Map of Project Location
EXHIBIT 2	Map of Construction Footprint
EXHIBIT 3	Map of Construction Footprint and Mitigation Site
EXHIBIT 4	Map of Areas at the Mitigation Site
EXHIBIT 5	Baseline Map Book
ATTACHMENT 1	Mitigation Monitoring and Reporting Program
ATTACHMENT 2	Declining Amphibian Populations Task Force Fieldwork Code of Practice

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1

ATTACHMENT 3A, 3B

Habitat Management Lands Checklist; Proposed Lands for
Acquisition Form

ATTACHMENT 4

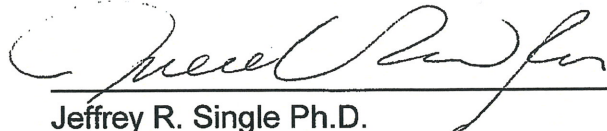
Letter of Credit Form

ATTACHMENT 5

Mitigation Payment Transmittal Form

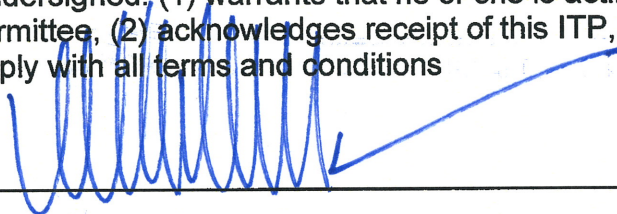
ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

on

3/12/14Jeffrey R. Single Ph.D.
Regional Manager
CENTRAL REGION**ACKNOWLEDGMENT**

The undersigned: (1) warrants that he or she is acting as a duly authorized representative of the Permittee, (2) acknowledges receipt of this ITP, and (3) agrees on behalf of the Permittee to comply with all terms and conditions

By:



Date:

March 13, 2014

Printed Name:

Mark A. McLaughlin

Title:

Director of Environmental Services

Incidental Take Permit
No. 2081-2013-025-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO SECTION PERMITTING PHASE 1